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AUTHORIZE APPROPRIATIONS FOR THE HAZARDOUS MATERIALS TRANSPORTATION ACT

GOVERNMENT
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DOCUMENTS

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BEFORE THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 1896

TO AMEND THE HAZARDOUS MATERIALS TRANSPORTATION
ACT TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 1979

APRIL 18, 1978

Serial No. 95-76

Printed for the use of the
Committee on Commerce, Science, and Transportation



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AUTHORIZE APPROPRIATIONS FOR THE HAZARDOUS MATERIALS TRANSPORTATION ACT

TUESDAY, APRIL 18, 1978

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, D.C.

The committee met at 9:06 a.m., in room 235, Russell Senate Office Building, Hon. John A. Durkin presiding.

OPENING STATEMENT BY SENATOR DURKIN

Senator DURKIN. Ladies and gentlemen, I think we better get moving. We have a busy schedule this morning.

This morning the committee will consider S. 1896, a bill to amend the Hazardous Materials Transportation Act to authorize appropriations for fiscal year 1979. At the time of its introduction and subsequent enactment over 3 years ago, it was hoped that this legislation would reorganize and clarify the Federal Government's regulatory program for the transportation of hazardous materials. At the time this legislation was introduced, the existing hazardous materials program was scattered throughout the Federal Government. More than one-half dozen agencies had regulatory responsibility in the area of hazardous materials. Enforcement and compliance powers were weak, container manufacturers were unregulated, and thousands of exemptions from the regulations were being granted with no serious consideration to the consequences of granting those exemptions. In addition, the sanctioning authority was so complex that very few were deterred from violating the law. The Hazardous Materials Transportation Act was an attempt to strengthen an inefficient and woefully inadequate regulatory program.

In the last few months, a number of disasters involving transportation of hazardous materials have once again focused national attention on the manner in which these dangerous substances are handled and transported. The purpose of our hearing this morning is to evaluate the success of the Department of Transportation and the Carter administration assuming a leadership role in this important area. Prior to this hearing the committee submitted to the Department a series of questions on the hazardous materials transportation program. The Department's answers to those questions will form the basis of the questioning this morning. In addition, I hope the Department will be able to provide the committee with some indication that it is setting priorities and addressing them in a way that will reduce future tragedies involving hazardous materials.

[The bill and questions and answers follow:]

[S. 1896, 95th Cong., 1st sess.]

A BILL To amend the Hazardous Materials Transportation Act to authorize appropriations for fiscal year 1979

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 115 of the Hazardous Materials Transportation Act (49 U.S.C. 1812) is amended by (1) striking out "and" after "September 30, 1976", (2) striking the comma after "1977", and (3) inserting after "1978" the following: ", and such sums as are necessary for the fiscal year ending September 30, 1979".

THE SECRETARY OF TRANSPORTATION,
Washington, D.C., April 13, 1978.

Hon. HOWARD W. CANNON,
Chairman, Committee on Commerce, Science, and Transportation,
U.S. Senate, Washington, D.C.

DEAR HOWARD: Thank you for your letter of March 8, 1978, forwarding a series of questions concerning the transportation of hazardous materials. Enclosed are our responses numbered to correspond with your questions.

I hope this information is helpful to you and we look forward to testifying before your Committee at the reauthorization hearing on S. 1896, scheduled for April 14, 1978.

Sincerely,

BROCK ADAMS.

Enclosures.

EMERGENCY INFORMATION SYSTEM

Question 1. Section 109(d) (2) of P.L. 93-633 states that the Secretary shall: "establish and maintain a central reporting system and data center so as to be able to provide the 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."

Question 1a. What action has the Secretary taken to implement this provision?

Answer. The Secretary has not taken specific action to implement this provision, in view of the existing availability and capability of the Chemtrec system discussed below.

Question 1b. How has the Department interpreted this provision?

Answer. The Department interprets this provision to mean that the intended system should be accessible to emergency response personnel at the scene of transport emergencies involving hazardous materials, to provide them with appropriate information and advice on the hazards of the material involved and how to handle the situation in a manner that will minimize risk to the public and the emergency response personnel.

Question 1c. Does this provision call for a "Hazardous Materials Emergency Information System" similar to that established by the private sector, e.g., CHEMTREC?

Answer. See answer (d) which follows.

Question 1d. What is the Department's position on the creation of a "Hazardous Materials Emergency Information System"?

Answer. Since 1970 when what is now Section 109(d) (2) was just enacted, the Department has been of the view that the Manufacturing Chemists Association's CHEMTREC system provides just such a centralized hazardous materials emergency response capability. Considerable Federal staffing and support resources would be required to duplicate the CHEMTREC program. Much of the information used by CHEMTREC is now freely and fully provided by hundreds of industry participants. It is uncertain as to whether a Federal mandatory arrangement could gain a similar rapport due to concerns that would be generated over the possible Federal use of information, supplied for emergency information purposes, for other activities such as enforcement. We note that a Bill entitled the "Chemical Emergency Response Team Act" (H.R. 7174) was introduced on May 13, 1977, which would give the Environmental Protection Agency full authority to coordinate a Federal program aimed at response to incidents which may result in damage to the environment or risk of injury to human beings. Without commenting on other features of that Bill, we do support that part of it that calls for emergency response development to be coordinated on a government-wide basis as a total and fully integrated system.

Question 1c. What should this system encompass if it is created?

Answer. See answer 1d above.

HAZARDOUS MATERIALS INFORMATION SYSTEM

Question 2. When discussing the creation of a hazardous materials information system, a Department spokesman stated before this Subcommittee: "This is something that the Government is going to have to make a hard call on, as I see it. We will do that, and you will not have to ask that question again." (See Appendix I) Approximately two years have passed since this commitment was made. Please discuss in detail all steps taken in this area since March 4, 1976.

Answer. Since this statement was made, there has been considerable activity on this subject at both the United Nations Committee of Experts on the Transport of Dangerous Goods and the Intergovernmental Maritime Consultative Organization (IMCO). The Economic and Social Council adopted the recommendations of the Committee of Experts on the Transport of Dangerous Goods during its March 1977 session. One of the recommendations pertained to the adoption of a 3-digit hazard information number that would convey the hazardous properties of materials in transportation. A considerable amount of debate was generated by this decision, and at a recent session the recommendation was rescinded in favor of the use of United Nations serial numbers to specifically identify named materials. Since the United States exports approximately \$5 billion worth of hazardous materials annually, and considering the indications we have received from Canadian officials that they intend to adopt IMCO and United Nations standards, we believe that we should await further international developments before initiating action for the adoption of any specific hazard information system for domestic application within the United States. This does not mean that we are allowing United States interests to be dominated by international activities in deciding upon what is best for use in the United States. However, we do feel that we should give international developments pertaining to hazardous materials full consideration and adopt for our internal use internationally compatible standards wherever appropriate.

The second factor suggesting that we should not rush to domestic adoption of one of the competing hazard information systems consisting of numerical assignments based on priorities of materials is the need for considering how those systems would function in conjunction with our recently adopted hazardous materials communications regulations governing documentation, and specifying marking, labeling, and a completely revised placarding system. We feel that some time should be allowed to evaluate these new communications requirements before we develop proposals based on numerical properties codes.

FEDERAL HAZARDOUS MATERIALS REGULATIONS

Question 3. Among industry officials, it is often said that too many Federal agencies issue regulations that affect the transportation of hazardous materials. Please review the enclosed testimony presented by Clifford J. Harvison which addresses this subject. (See Appendix II)

Question 3a. Does the Department agree with his analysis?

Answer. We agree that the Hazardous Materials Transportation Act (HMTA) was intended to consolidate Federal regulatory authority over the transportation of hazardous materials, and that activities of other agencies under various statutes that also concern materials that are treated as hazardous when in transportation do sometimes impact transportation activities.

Question 3b. What is the Department's position on his legislative recommendation outlined on pages 38 and 39 of Appendix II?

Answer. A provision of the kind suggested by Mr. Harvison was incorporated into the Resource Conservation and Recovery Act (RCRA; see Section 3003 which was added to the Solid Waste Disposal Act by Public Law 94-580). That provision authorizes the Environmental Protection Agency (EPA) to recommend to the Department of Transportation (DOT) amendments to regulations issued under the HMTA, to accommodate the goals of the RCRA concerning transportation of hazardous wastes. The provision also requires any transportation regulations that EPA issues to be consistent with HMTA regulations. Extensive coordination between EPA and DOT, including a joint public meeting, has resulted in preparation by DOT of proposed hazardous waste transportation regulations which would reduce the scope of regulations EPA must publish to fulfill the transportation related provisions of the RCRA. That coordination was clearly

facilitated by the existence of an express RCRA provision concerning DOT activities under the HMTA.

One practical problem overlooked by Mr. Harvison concerns the express HMTA criteria which bind DOT in defining and regulating hazardous materials transportation. While we believe it appropriate that DOT be the source of transportation safety regulations dealing with hazardous materials, it may not always be possible to accommodate other agencies' transportation related responsibilities, because materials which Congress has identified to other agencies for various regulatory purposes may not fall within the criteria specified in the HMTA. Using the RCRA as a current example, the definition of "hazardous waste" to which EPA is bound (§ 1004(5)) differs from the definition of "hazardous material" in § 103(2) of the HMTA. While this difference appears to be surmountable in the HMTA-RCRA situation, it may not be in other interagency situations, with the possible result that despite the obvious efficiencies of having transportation regulations emanate solely from DOT so far as the safe transportation of material is concerned, the HMTA may not authorize the kind of cooperative effort Mr. Harvison envisions.

Question 3c. Since 1976, have problems of regulatory overlap increased? Please describe in detail the scope and nature of these problems.

Answer. In addition to the RCRA, the Toxic Substance Control Act (TSCA, Public Law 94-469) requires EPA to regulate the manufacture, processing, distribution in commerce, use or disposal of chemicals that present an unreasonable risk of injury to health and the environment. Although the TSCA's legislative history and text do not expressly authorize the regulation of transportation, TSCA regulation of activities occurring prior to transportation (such as containment and labeling) are likely to impact on transportation. It is not clear that the HMTA authorizes DOT to address all of the environmental hazards to which the TSCA may be directed.

The Federal Water Pollution Control Act (FWPCA; Public Law 92-500 as amended) also impacts on transportation. In this case EPA and the Coast Guard are directly tasked with administering the FWPCA. The Coast Guard has questioned whether the HMTA can be used in support of its FWPCA responsibilities concerning hazardous polluting substances regulated under that Act, since as previously noted, it is not clear to what extent the HMTA authorizes the imposition of transportation regulations to migrate environmental hazards.

Legislation is likely on the subject of recombinant DNA research. DOT has previously indicated that it intends to support the transportation aspects of the National Institutes of Health Guidelines on recombinant DNA research, but we also recognize that transportation regulations on this subject will in some cases concern materials for which the hazards may be unknown or at least not rigorously demonstrated.

Question 3d. What steps has the Department taken to deal with the problems outlined in Mr. Harvison's testimony?

Answer. Coordination with EPA regarding the RCRA is one such step. The Department is following EPA's implementation of the TSCA with some interest and has offered staff advice on the proper relationship between regulations to be issued under the TSCA and our own Hazardous Materials Regulations. In late 1976, the Materials Transportation Bureau (MTB) also published an advance notice of proposed rulemaking concerning carcinogenic, mutagenic and teratogenic materials which are presently regulated under other statutes.

Question 3e. Do problems exist over conflicting Federal, State, and local regulations concerning the transportation of hazardous materials? Has the Department ever preempted State regulations?

Answer. Yes, problems of this kind have been around in one form or another for quite some time, especially in the area of highway transportation. In 1976, New York City forbade the transportation of most radioactive materials within its boundaries, and MTB has prepared and issued, at the request of a Long Island highway shipper, an administrative opinion concerning possible preemption of the City's ordinance under the HMTA. Although that opinion stated that the New York City code is not inconsistent with the requirements of the HMTA or regulations issued under it to date, it does not preclude the possibility that other Federal Statutes may, in fact, preempt the ordinance. Procedures providing for the preparation of such an opinion were published by DOT in 1976 to implement Section 112 of the HMTA.

An example of HMTA preemption occurred in 1976 when the State of Illinois attempted to impose a requirement concerning rail carriage of hazardous ma-

terials by tank car. The provision, which addressed the handling of tank cars in rail yards, was found by the Southern District of Illinois to be preempted under the Federal Railroad Safety Act partly as a result of previous action taken under the HMTA on the same subject (*Atchison, Topeka and Santa Fe Railway Co. v. Illinois Commerce Commission*, No. 74 C 2334, September 28, 1977). Another early example of potential HMTA preemption occurred in 1975, when Louisiana laid aside a State proposal to require that commercial aircraft passengers be warned of the presence on board of radioactive materials. Termination of this proposal was in large part due to advice from DOT regarding preemption under the HMTA. Frequently the mere possibility of Federal preemption is sufficient to avoid conflict between Federal and State or local requirements.

INTERAGENCY WORKING RELATIONSHIPS

Question 4. Please assess the Department's working relationship with OSHA, EPA, NRC, and DOE concerning the transportation of hazardous materials. What areas of conflict, duplication, or overlap exist between the responsibilities of these agencies and those of the Department?

Answer.

OSHA

The Department of Transportation (DOT) maintains a continuing liaison with the Occupational Safety and Health Administration (OSHA) concerning the promulgation of compatible standards applicable to the handling and transportation of hazardous materials. DOT and OSHA have previously achieved the joint resolution of definitions of flammable and combustible liquids. To date the DOT and OSHA have been unsuccessful in arriving at a memorandum of understanding to outline each Agency's area of jurisdiction. The potential area of conflict lies in determining the applicability of each Agency's requirements to carriers of hazardous materials, i.e., whether such carriers are subject to OSHA requirements in cases where DOT has exercised its authority.

EPA

Because of the potentially overlapping statutory authority in the HMTA and the Resource Recovery and Conservation Act (RCRA) and the Toxic Substances Control Act (TSCA), the EPA and the DOT have been working to develop mutually satisfactory requirements for the transportation of hazardous wastes and toxic substances. The DOT and the EPA held a joint public meeting in October 1977 to hear public views on proposed regulation of transportation of hazardous wastes. Both agencies expect to issue Notices of Proposed Rulemaking in the near future. We believe that through cooperative liaison, the hazardous materials regulations of this Department can be modified to accommodate EPA's needs for hazardous wastes as required by RCRA. In the area of toxic substances, the DOT is participating in the Council on Environmental Quality's Toxic Substances Strategy Committee, as well as EPA's Interagency Toxic Substances Data Committee. Frequent liaison is carried out with EPA with the view of assuring that any requirements promulgated for toxic materials under TSCA are compatible with the HMTA and regulations issued under it.

NRC

Both DOT and the Nuclear Regulatory Commission (NRC) possess statutory authority to regulate safety in the transportation of hazardous materials. DOT authority is based on provisions of the HMTA, whereas NRC authority is based on the Atomic Energy Act of 1954. Because of this overlap in statutory authority, DOT and NRC (and their predecessors the Interstate Commerce Commission (ICC) and Atomic Energy Commission (AEC)), have operated under memoranda of understanding, first between AEC and ICC in 1966, and later between DOT and AEC in 1973. Currently DOT and NRC are updating the 1973 memorandum. The purpose of these memoranda is to outline the areas in which each agency will regulate so as to preclude duplicative or overlapping regulations. Cooperation between the two agencies has been excellent, principally due to the existence of the memoranda of understanding and the close technical liaison and working relationships of the respective staffs.

DOE

Except where the transportation is by pipeline requiring a certificate of public convenience and necessity to be issued by the Federal Energy Regulatory Com-

mission, the DOT and the Department of Energy (DOE) do not share any overlapping responsibilities with respect to the transport of hazardous materials. The nuclear programs of DOE (preceded by the Energy Research and Development Administration (ERDA) and the AEC) when located in AEC had an interface with DOT with respect to packages for larger quantities of nuclear materials transported by AEC private contractors and AEC National Laboratories. With disestablishment of AEC, formation of ERDA and then DOE, this package review and approval function for DOE prime contractors and national laboratories has shifted to the NRC. In research and development programs related to nuclear and other energy-related materials, the DOT and DOE maintain a close technical liaison.

INTERAGENCY COMMUNICATION

Question 5. What steps have the Department taken to improve the lines of communication between all Federal organizations which affect, directly or indirectly, the transportation of hazardous materials? Please outline the formal procedures that have been established to ensure that adequate communication takes place.

Answer. Six agencies (Department of Transportation, Environmental Protection Agency, Nuclear Regulatory Commission, Interstate Commerce, Civil Aeronautics Board, and Department of Health, Education and Welfare) are concerned with some aspect of safety regulation of hazardous materials in commerce. The Department of Transportation is the primary agency concerned with identifying hazardous materials which pose risks in transportation and establishing necessary transportation controls. The Environmental Protection Agency's authority includes promulgation of regulations for hazardous wastes, and the Nuclear Regulatory Commission's regulations address packagings for Type B (larger) quantities of radioactive materials (including fissile materials). The ICC and the Civil Aeronautics Board, as economic regulatory agencies, become involved primarily in a review capacity when tariffs conflicting with the Department of Transportation's regulations are filed by common carriers wishing to restrict their carriage of hazardous materials. The Center for Disease Control in the Department of Health, Education and Welfare promulgates requirements for interstate shipment of etiologic agents. The Department of Transportation coordinates on a case-by-case basis its regulatory actions with each of these agencies and in the case of the Nuclear Regulatory Commission, works through a formal memorandum of understanding to avoid conflicting and duplicative requirements.

Because of potentially overlapping statutory authority in the Hazardous Materials Transportation Act and the Resources Conservation and Recovery Act of 1976, the Department of Transportation and the Environmental Protection Agency are currently working very closely with each other to develop mutually satisfactory regulations for the transportation of hazardous wastes. The Toxic Substances Control Act provides the Environmental Protection Agency with extensive additional authority to regulate production, distribution in commerce, and use of new chemicals that pose an unreasonable risk of injury to health or the environment. The Department of Transportation has consulted with the Environmental Protection Agency on some transportation aspects of the Environmental Protection Agency proposals to relationship distribution in commerce and disposal of polychlorinated biphenyls. The Department of Transportation is also participating on the Interagency Toxic Substances Data Committee to study the feasibility of a standard classification system for chemical substances and the storage and retrieval of information on chemical characteristics. We anticipate that additional coordination will occur as the Environmental Protection Agency implements the Toxic Substances Control Act.

Another Department of Transportation relation with the Environmental Protection Agency has resulted from the Federal Water Pollution Control Act, which provides for regulation of oil and hazardous substances spill prevention and cleanup methods. The two agencies have entered into an agreement to define the type of facilities over which each has cognizance.

Other interested agencies (Occupational Safety and Health Administration, Consumer Product Safety Commission, Bureau of Alcohol, Tobacco and Firearms, Department of Energy, Mining Enforcement and Safety Administration, and Department of Defense) are concerned with safety and security aspects which are directly related to hazardous materials transportation. The Department maintains a continuing liaison at the technical staff level with those other agencies, and as the need arises develops formal written exchanges or memoranda of understanding.

1977 HIGHLIGHTS

Question 6. Please summarize the highlights of the Department's activities concerning the transportation of hazardous materials for 1977.

Answer. Summaries of the Department's overall hazardous materials activities for 1977 are provided in response to Question 7. The Materials Transportation Bureau's principal hazardous materials activities were as follows:

(1) Rulemaking actions included issuance of 19 amendments to the Hazardous Materials Regulations, issuance of 16 notices of proposed rulemaking, docketing of 811 exemption applications (including requests to be parties to exemptions), grants of 906 exemptions, denial of 257 and elimination of over 100 exemptions through conversion of their provisions to regulations of general applicability.

(2) Compliance inspections were conducted of facilities and operations of 20 carriers, 35 shippers, and 26 container manufacturers, including 7 foreign compressed gas cylinder manufacturers and 7 independent inspection agencies.

(3) Commencing in October, the Materials Transportation Bureau's enforcement program started initiating civil penalty actions under the new enforcement procedures which became effective earlier during the year. To date 13 penalties totaling \$17,850 have been assessed and collected and one compliance order has been issued. Five additional actions are pending.

(4) The Department of Transportation's registration program included issuance of registration numbers to 36 DOT Specification 17-Series drum reconditioners, 3 DOT Specification 39 cylinder manufacturers, 1 DOT Specification 3T cylinder manufacturer, and 15 DOT Specification 35 polyethylene drum manufacturers.

(5) The hazardous materials incident reporting system required editing and analysis of over 15,000 incident reports.

(6) The research and development contractual program included development of a training course to assist emergency response personnel and communities in developing action plans as well as in responding to hazardous materials transportation incidents; establishment of criteria and facilities for testing of foreign manufactured compressed gas cylinders; and continued support of regulations development through packaging performance testing and of compliance through container testing.

(7) The training program consisted of conducting 24 hazardous materials awareness seminars attended by more than 2,300 persons; support of 46 courses attended by 2,165 persons at the Department of Transportation's Transportation Safety Institute; development of 26 new educational materials, including a film on radioactive materials transportation; and distribution of more than 775,000 items of training materials in response to 5,200 requests.

HAZARDOUS MATERIALS TRANSPORTATION DATA

Question 7. Please provide the Committee with data for the calendar year 1977 on the number of deaths, injuries, inspections, and fines concerning the transportation of hazardous materials. Please update Tables 5, 6, 7, 8, and 12 found in the Seventh Annual Report of the Secretary of Transportation on Hazardous Materials Control with data for calendar year 1977.

Answer. The following tables provide calendar year 1977 data concerning hazardous materials transportation. The tables are numbered to correspond with the tables in the Seventh Annual Report of the Secretary of Transportation on Hazardous Materials Control.

TABLE 5.—HAZARDOUS MATERIALS INSPECTORS, 1977

Operating administration	Full-time inspectors	Part time			Total person-years
		Inspectors	Percent of time	Person-years	
USCG.....	0	717	15	107.6	107.6
FAA.....	20	129	35	45.2	65.2
FHWA.....	9	128	20	25.6	34.6
FRA.....	16	42	15	6.3	22.3
RSPD (MTB).....	5	3	6	.2	5.2
Total.....	50	1,019		184.9	234.9

TABLE 6.—HAZARDOUS MATERIALS COMPLIANCE INSPECTIONS

	USCG		FAA		FHWA		FRA		RSPD (MTB)		1976 Total	1977 Total
	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977		
Inspections of carrier operations.....												
Inspections of shipper facilities.....			11,796	11,892	2,963	1,662	3,131	2,208	34	20	17,924	15,782
Inspections of container manufacturers and reconditioner facilities.....					2,744	1,267	682	613	114	35	3,540	1,915
Inspections of freight forwarder facilities.....					178	194	44	41	80	26	302	261
Waterfront facilities.....							89	93	21	2	110	95
	6,770	1,736								3	6,770	1,739
Total.....	6,770	1,736	11,796	11,892	5,885	3,123	3,946	2,955	249	86	28,646	19,792

TABLE 7.—HAZARDOUS MATERIALS REGULATIONS VIOLATIONS AND ENFORCEMENT ACTIONS

Operating administration, action	1976	1977	Change	Change (percent)
USCG (bulk and nonbulk):				
Violations for which civil penalty actions initiated.....	988	1,836	+848	+86
Civil penalty actions completed.....	240	430	+190	+79
Total collected.....	\$85,660	\$130,620	+\$44,960	+52
Average penalty collected.....	\$357	\$304	-\$53	-15
FAA:				
Civil penalty actions initiated.....	116	105	-11	-9
Civil penalty actions completed.....	94	103	+9	+10
Total collected.....	\$81,675	\$72,600	-\$9,075	-11
Average penalty collected.....	\$869	\$705	-\$164	-19
FHWA:¹				
Criminal cases initiated.....				
Criminal cases completed.....				
Fines adjudged.....				
Average fine.....				
FRA:				
Criminal cases initiated.....	1	18	+17	
Criminal cases completed.....	0	5	+5	
Fines adjudged.....	0	\$4,350	+\$4,350	
Average fine.....	0	870	+870	
Prosecution declined by Department of Justice.....	0	9	+8	
Civil penalty actions ²	10	14	+4	+40
Total collected.....	\$15,500	\$23,225	+\$7,725	+50
Average penalty collected.....	\$1,550	\$1,660	+\$110	+7
RSPD:³				
Criminal penalties initiated.....	0	0	0	0
Civil penalty actions initiated.....	0	14	+14	
Civil penalty actions completed.....	0	7	+7	
Compliance orders initiated.....	0	1	+1	
Compliance orders completed.....	0	0	0	0
Total collected.....	0	\$3,850	-\$3,850	
Average penalty collected.....	0	\$550	-\$550	
Warnings.....	133	42	-91	

¹ Data will be forthcoming.² Actions undertaken by FRA, under the Federal Railroad Safety Act of 1976, for alleged violations of emergency order No. 5 prohibiting humping and cutting off while in motion DOT 112A and 114A placarded tank cars.³ RSPD/MTB initiated its enforcement program in October 1977. No enforcement work had been accomplished by MTB prior to that date.

TABLE 8.—HAZARDOUS MATERIALS TRANSPORT VEHICLE INSPECTIONS

	1976	1977	Change (percent)
Railroad tank cars inspected.....	8,744	9,700	+10
Railroad freight cars (nontank) inspected.....	3,763	5,040	+33
Vessels boarded and inspected.....	40,853	40,842	
Motor vehicles inspected.....	2,087	3,443	+64
Total.....	55,447	59,025	+6

TABLE 12.—HAZARDOUS MATERIALS—INCIDENT REPORTS AND INVESTIGATIONS, 1976-77

Mode	Incidents reported		Reporting carriers		Fatalities		Injuries		Investigations	
	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977
Air carriers.....	84	130	24	50	0	0	4	9	100	130
Highway carriers (for hire)....	10,255	13,000	429	500	12	13	568	488	317	269
Highway carriers (private)....	572	1,250	125	150	4	17	49	60		
Rail carriers.....	959	1,500	42	50	2	1	198	233	373	314
Water carriers.....	15	50	8	20	0	0	1	0	0	0
Freight forwarders.....	12	20	8	10	0	0	0	0	0	0
Total.....	11,897	15,950	636	780	18	31	820	790	790	713

CIVIL PENALTY ASSESSMENTS

Question 8. In P.L. 93-633, the Congress authorized civil penalties of up to \$10,000 for each violation related to the transportation, packaging, or shipping of hazardous materials. As indicated in Appendix F of the Secretary's Seventh Annual Report on Hazardous Materials Control, most of the penalties imposed are less than \$3,000.

Question 8a. What criteria are used in deciding the amount of the penalty to be imposed?

Answer. In assessing a civil penalty under the authority of the Hazardous Materials Transportation Act (HMTA; 49 U.S.C. 1801 *et seq.*), Section 110(a) requires that the following considerations be used:

1. The nature, circumstances, extent and gravity of the violation; and
2. With respect to the person found to have committed the violation, the degree of culpability, any history of prior offenses, ability to pay, effect on ability to continue to do business, and such other matters as justice may require.

Question 8b. Why are the penalties so low in relationship to the \$10,000 maximum?

Answer. Civil penalties assessed by the Materials Transportation Bureau must, by the statutory provisions cited above, be determined on the statutory criteria. Consequently, although the statute authorizes a maximum civil penalty of \$10,000, the application of the required criteria will, to the extent the alleged violator provides substantiating information and evidence concerning mitigating factors, result in civil penalties of less than \$10,000 per violation.

Question 8c. Please explain why the Department imposed only a \$500 penalty when Seaboard World Airlines, Inc., is said to have accepted for shipment a hazardous material, classified as a Poison B, which was loaded with foodstuff on board an airplane. We understand that the poison leaked, filling the cargo area with fumes.

Question 8d. Please explain why only a \$1,000 fine was imposed when Windjammer Cruises is said to have shipped corrosive material and nonflammable compressed gas which was improperly packaged and labeled.

Answer. Each of these cases, investigated and administratively prosecuted by the Federal Aviation Administration (FAA), was developed and completed in 1975, prior to the FAA's enforcement program being brought under the authority of the HMTA. Under the civil penalty authority of the Federal Aviation Act of 1958 (49 U.S.C. 1301 *et seq.*), civil penalty assessments are limited to \$1,000 for each violation. This fact coupled with the discussion of the points raised in 8b above led to the \$500 and \$1,000 assessments.

Question 8e. Why is the Department reluctant to impose \$10,000 fines for flagrant violations by financially secure companies? If the Department placed severe financial penalties on violators, would this serve as a deterrent to other potential violators?

Answer. In light of the assessment criteria in the HMTA, the fact of whether a given violation is "flagrant" is an element to be established in arriving at an appropriate civil penalty. A flagrant violation contemplates a willful violation, which is the statutory standard for establishing a criminal violation. Obtaining sufficient evidence to support the prosecution of such a violation is a much more difficult matter than proving a civil penalty case. In fact, this is one of the primary bases for establishing administrative enforcement programs utilizing civil penalties. With respect to financial soundness of a given violator, as noted above this is one of the assessment criteria we are required to use. Where the evidence supports a substantial civil penalty, and the financial soundness of the alleged violator is sufficient to warrant a larger civil penalty, we will assess accordingly. For example, within the last month we collected a \$9,000 civil penalty from one of the major shippers using portable tanks for the transportation of a chemical (acrolein inhibited) widely used in oil well drilling operations. We believe that based on the nature of the case and financial resources of the violator, the \$9,000 assessment was appropriate.

With respect to the issue of deterrence, we certainly see that element as a major factor in the administration of all DOT hazardous materials enforcement programs. However, as noted previously, what we would like ultimately to achieve must be tempered by what we can realistically obtain. As the various enforcement programs of DOT modal operating administration evolve under the HMTA procedures, we believe that the three basic elements of civil penalty assessment (awareness, penalty, and deterrence) will be effectively presented through our civil penalty assessments.

APPLICABILITY OF REGULATIONS

Question 9. Please comment on the enclosed letter between the National Tank Truck Carriers, Inc., and the Congressional Research Service. (See Appendix III) What can and will the Department do about this situation?

Answer. Section 397.21 of the Motor Carrier Safety Regulations requires that motor vehicles transporting hazardous materials of a kind or quantity that require placarding must be marked with the name of the carrier and the city or community in which the carrier maintains its principal office. The marking requirements are similar to those prescribed by the Interstate Commerce Commission for vehicles operated by common and contract motor carriers. If Mr. Harvison's complaint is addressed to carriers performing operations subject to our Hazardous Materials Regulations, i.e., carriers engaged in interstate or foreign commerce, such violations of the regulations would make these carriers subject to the penalty provisions of the Hazardous Materials Transportation Act, since the Motor Carrier Safety Regulations (49 CFR Parts 390-397) were recently incorporated by reference within the Department's Hazardous Materials Regulations. Mr. Harvison's letter has been provided to the Director of the Bureau of Motor Carrier Safety in the Federal Highway Administration, with the request that he contact Mr. Harvison for further details concerning the operations of the carriers mentioned in his letter.

HAZARDOUS MATERIALS RESEARCH

Question 10. Please describe the scope and nature of the Department's research efforts concerning the transportation of hazardous materials.

Answer:

Overall Departmental R. & D.

As a result of the responsibilities delegated to it by Sections 104 and 109 of the Hazardous Materials Transportation Act, the Department of Transportation conducts hazardous materials research and development, both directly and indirectly. All such projects have as their fundamental goal improved safety through a reduction in the frequency and severity of transportation accidents involving hazardous materials cargo and through provision of technical information bases for rulemaking.

In performing direct research, the Materials Transportation Bureau (MTB) and the United States Coast Guard (USCG) have conducted tests in the area of hazardous materials packaging performance, examining the behavior of various containers under fire conditions.

The Department conducts most research and development indirectly, employing the services of government and private research facilities. The Federal Highway Administration has conducted research on stress-corrosion cracking in cargo tanks constructed of quenched and tempered steel and used to transport anhydrous ammonia. Laboratory testing proved that the addition of water at prescribed concentration will inhibit cracking, thus substantiating rulemaking completed in 1975, which requires that shippers ensure that water is added to ammonia shipped in quenched and tempered steel cargo tanks. Also, a statistical discriminant function was developed which can predict cracking with greater than 80 percent accuracy.

The Federal Railroad Administration acting on completed research and development studies, developed some performance specifications for thermal shields, tank head puncture resistance systems, and coupler vertical restraint systems. These specifications provided a foundation upon which later MTB decisions were based in the development of Rulemaking under Docket HM-144.

The Coast Guard has increased research emphasis on the containment and recovery of unintentionally released hazardous materials. In the area of prediction of extreme forces experienced by ammunition cargo in marine transport, the Coast Guard undertook a computer model study in response to a National Transportation Safety Board recommendation.

The staffs of the MTB and the operating administrations participate in joint briefings which are aimed principally at achieving coordinated, non-duplicative research and development and encouraging cooperative projects when a mutual interest or responsibility exists. This coordination serves to maximize data utilization from hazardous materials studies. In addition to the MTB and USCG cooperative fire exposure testing of metal and plastic drums, the MTB and the Federal Aviation Administration, in association with the Nuclear Regulatory

Commission, have jointly supported federal-state radioactive materials surveys to evaluate levels of exposures to cargo handlers in air transportation.

MTB R. & D.

The R. & D. efforts of MTB on hazardous materials have been oriented toward support of the regulations development and operations programs.

The principal areas of R. & D. have been in :

a. Classification of HM

Specific studies on the classification and test criteria to classify HM have been carried out. In general these have been either to test specific materials against existing or proposed regulatory test criteria, i.e., toxics and corrosives, or R&D to develop proposed quantitative classification test criteria where only qualitative regulatory criteria exist, i.e., oxidizers and flammable solids.

Other studies have been directed toward filling of gaps in regulatory criteria, such as parameters of thermally unstable and spontaneously combustible materials. Results of these studies have been or will be used to support proposed regulatory changes.

b. Packaging of HM

The existing packaging specifications for HM are primarily design, hardware-oriented. This system encourages exemptions to allow the use by shippers of alternate, and in many cases, superior packagings to those prescribed in the regulations. The conversion to performance-oriented packaging specifications has been recognized as a feasible way to provide greater flexibility, reduce exemptions, and encourage innovation and improvement of packagings used for HM transport. A number of specific R&D studies have been aimed at developing draft performance-oriented packaging specifications for "families" of HM packagings, i.e., drums and pails, boxes and cases, and bags and carboys. The next, and very difficult phase of these efforts will involve a translation of these draft specifications into proposed regulatory requirements on a commodity basis.

c. Miscellaneous programs

Other programs of R&D support have involved :

1. Development of methodology for risk assessment in HM decisionmaking.
2. Development of training films and an Emergency Services Training Program.
3. Studies to define and quantify the normal transport environment.
4. Studies to define and quantify the parameters of severe transport accidents.
5. Studies of the physical properties and behavior of plastic packagings used for HM transportation.
6. Studies of the metallurgical properties of certain HM packagings.
7. Support to NRC on ad hoc programs with selected states to perform surveillance of radioactive shipments.

The results of all R&D are published in the Standard DOT Report format and made available to the public through the National Technical Information Service.

MATERIALS TRANSPORTATION BUREAU PERSONNEL

Question 11. Please provide a listing of the number of personnel of the Materials Transportation Bureau and its predecessors since 1970.

Answer. The following table provides the fiscal year staffing totals for the Materials Transportation Bureau since its creation and for the Office of Pipeline Safety and Hazardous Materials prior to that time.

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Office of Pipeline Safety Operations.....	25	27	26	26	25	41	40	40	52
Office of Hazardous Materials Operations.....	30	35	37	37	37	39	63	66	70
Materials Transportation Bureau (Office of the Director).....							5	5	5
Total.....	55	62	63	63	62	80	108	111	127

MATERIALS TRANSPORTATION BUREAU RESOURCES AND RESPONSIBILITIES

Question 12. Since 1970, the Congress has placed many additional responsibilities on the Department concerning the transportation of hazardous materials.

Are the personnel resources of the Department, especially those of the Materials Transportation Bureau (MTB), adequate to handle its current responsibilities? Please discuss your workload, backlogs, and any areas of difficulty.

Answer. It is because of these additional responsibilities that the President's budget for Fiscal Year 1979 requests 7 additional positions for the hazardous materials program—for the express purpose of meeting our current regulatory program responsibilities, including ensuring that the regulations are adequate for new hazardous materials products and new technology. The new positions will be dedicated to developing regulatory documents, preparing technical documentation, ensuring compatibility with other Federal and international hazardous materials standards and initiating and monitoring safety device approvals required by the regulations.

As a general summary of Fiscal Year 1977 activities, the MTB docketed 1,209 exemption applications, granted 1,230 exemptions and denied 251, plus processing 12 appeals. Our exemptions workload for Fiscal Year 1978 consists of 229 applications pending from 1977 plus an additional 1,100 expected to be filed during the year. At this time, 473 petitions for rulemaking including some generated within DOT are pending and 24 open rulemaking dockets are awaiting final disposition. These pending regulatory actions are addressed in the MTB Regulatory Review and Development Plan discussed in Questions 18 and 19.

MATERIALS TRANSPORTATION BUREAU DIRECTOR

Question 13. Does the civil service grade level of the Director of the Materials Transportation Bureau need to be raised to a GS-16 or GS-17? Please explain your answer and consider the ability of the Director to interact with other supergrades in the Department.

Answer. When the Materials Transportation Bureau was established, in July 1975, the position of the Director of the Bureau was filled at the AD-18 level. The Department is currently in the process of converting the position from schedule C to career status at the comparable grade level.

SIMPLIFICATION OF REGULATIONS

Question 14. What recent efforts have the Department made to simplify the existing regulations contained in Title 49 of the Code of Federal Regulations? Has the Department complied with the President's directives for "plain English" regulations? In what way?

Answer. Recent efforts by the Department to simplify the existing regulations include those of less than two years ago when the hazardous material regulations previously contained in three different volumes of the Federal Code (Title 49, Title 46, and Title 14) were consolidated and reduced by approximately 700 pages. In addition, to the consolidation of the regulations, similar portions from each Title were standardized and organized together for ease of understanding. As an example, the regulations dealing with shipping papers, marking, labeling, and placarding were consolidated in Part 172 of Title 49 to form the Hazardous Materials Communications Regulations. Also, the list of definitions was expanded in these new regulations to promote understanding of the various terms which previously were associated with only one mode of transportation. In addition, a docket to handle requests for relatively uncomplicated changes in the regulations has been established. This docket contains a brief summary of each requested change and, while reducing the overall time period usually associated with a regulatory change, it provides an ample comment period for review by the general public.

The Bureau has initiated an effort to comply with the President's directive for "plain English" by having each person involved in the rulemaking process attend the Regulatory Writing Course sponsored by the Federal Register. This course emphasizes use of simple terms to convey the intended message of a regulation.

This Bureau has also prepared its rulemakings in full compliance with the Federal Register's Handbook on the proper procedures for drafting regulations. In addition, each rulemaking in the Bureau must be reviewed by one or more persons whose duty it is to refine the words and language to meet the directives of "plain English."

TANK CAR REGULATIONS

Question 15. When did the Department last revise its regulations pertaining to LP tank cars?

Answer. In September 1977, under rulemaking Docket HM-144, the Hazardous Materials Regulations were amended to require the railroad industry to retrofit DOT Specification 112 and 114 tank cars used to transport flammable gases such as propane with headshields or protective head jackets to reduce the number of head punctures caused by the impact of couplers or broken coupler shanks; to install bottom and top shelf couplers capable of resisting vertical disengagements to reduce coupler overrides, the principal cause of head punctures; and to install thermal protection to prevent overheating of the product contained in the tank car. The amendments provide for retrofitting of existing tank cars in phases, but all changes must be made by January 1, 1982.

Other amendments relating to specifications for tank cars were issued under Docket HM-38 in December 1977 and February 1978. These amendments add "E shelf" and "F shelf" couplers designated by certain Association of American Railroads catalog numbers to the list of tank car couplers which have been approved by the Federal Railroad Administrator for installation on all tank cars built after January 1, 1971.

ENFORCEMENT RESPONSIBILITIES

Question 16. According to Table I of the Seventh Annual Report of the Secretary concerning hazardous materials control, the MTB has spent few hours on its compliance and enforcement responsibilities. Please justify this situation.

Answer. Table I in the Seventh Annual Report reflects person-hour efforts expended during calendar year 1976. At that time, the Materials Transportation Bureau (MTB) had not yet implemented its enforcement procedures. Four part-time persons were involved in compliance work. At the present time, MTB has five full-time compliance and enforcement personnel and plans to increase the staff with three full-time employees during FY 1978. MTB's enforcement procedures were implemented in January 1977, and enforcement work commenced in September of 1977.

The Secretary of Transportation has assigned to the MTB the major rulemaking responsibility for the hazardous material program in addition to the specific enforcement responsibility over container manufacturers and multimodal shippers. With the exception of regulation of bulk transportation of hazardous materials by the marine mode, formulation and issuance of hazardous materials regulations are MTB responsibilities. On the other hand, responsibility for administration and enforcement of the regulations is divided among five of the Department's operating elements. Inspection, compliance and enforcement activities relating to carriers by the specific modes of transport are planned and carried out by the Department's four modal operating administrations—the FAA, the FHWA, the FRA, and the USCG. As mentioned above, the MTB concentrates on manufacturers and shippers of hazardous materials.

UTILIZATION OF OUTSIDE CONSULTANTS

Question 17. Has the Department ever paid outside consultants to review and propose improvements in its activities concerning the transportation of hazardous materials?

Answer. The Department has on two occasions engaged outside consultants to review activities concerning the regulation of the transportation of hazardous materials. The first of these was "A study of the transportation of Hazardous Materials—A report to the Office of Hazardous Materials of the U.S. Dept. of Transportation." This was a cooperative effort of the Highway Research Board and the Committee on Hazardous Materials of the National Academy of Science—National Research Council. The report issued has been an important factor in the planning and implementation of the hazardous materials regulatory and R&D programs since that time. The second occasion was in 1972, when the Office of Hazardous Materials (OHM) engaged the services of the Paperwork Controls Division, National Archives and Records Service (NARS), under an interagency reimbursable agreement. A six months management study resulted in the issuance of a report entitled "Survey Report of Proposed Management Information System—Office of Hazardous Materials Operations." The study involved in-depth reviews of paperwork processing and related documentation by the OHM Staff; interviews with OHM staff, modal accident reporting staffs, and non-DOT persons involved with information systems related to regulated hazardous materials, and a study of the goals, functions and regulations of OHM. A number of recommendations were made, with several adopted in whole or in part.

REGULATORY PLANNING

Question 18. Is there a statement of purpose or function for the Materials Transportation Bureau by which management and staff can measure the importance of current and suggested projects, to determine the priority these projects should be given? If no such plan exists, please explain.

Answer. In 1969, the Hazardous Materials Regulations Board set forth its policy for the assignment of priorities for regulatory projects into three categories. They were: (1) safety problems requiring regulatory solutions; (2) elimination of special permits (exemptions); and (3) rulemaking and internally initiated projects to clarify or eliminate unnecessary regulations. Since that time, more than 100 different regulatory projects have been accomplished, including several pertaining to cargo tank and tank car safety and others pertaining to incident reporting, explosives, and compressed gases considered necessary to improve safety. On several occasions, written plans were developed for the purpose of providing guidance to the hazardous materials regulatory program. One such plan was provided to the Committee in October 1976 following the oversight and authorization hearings held in March of that year. We would be less than candid to suggest that any of those plans were closely followed or that they achieved their stated objectives. In many cases, they were far too optimistic as to what could be accomplished. Often the impact of public response and the competing demands of other program activities were not adequately anticipated. We have in the final stages of development a new regulatory review and development plan which we believe to be more realistic. It takes into account both the President's recent Executive Order 12044 on improving government regulations and the Secretary's internal memorandum on the same subject published in the Federal Register on March 8. We will present a copy of the plan at the time of the scheduled hearing on April 14.

REGULATORY REVIEW AND DEVELOPMENT PLAN

Question 19. Is there an overall plan by which one might determine how current and suggested future projects fit together and contribute to achievements projected over the next one, two, and five years?

Answer. As stated in response to Question 18, we are finalizing a regulatory review and development plan. This first annual publication covers expected MTB rulemaking activities and resource commitments for the forthcoming year. We expect that future publications of the plan will project beyond one year and eventually address projects to be accomplished over the ensuing five or more years with a level of priority assigned to each project. As with any plan of this type, allowances must be made for regulatory projects not contemplated at the time of its initial preparation.

RULEMAKING PRIORITY

Question 20. How is the priority of any current or suggested project or request for rulemaking determined?

Answer. Generally, first priority is given to any project involving a needed regulatory solution to a safety problem. Other priorities are assigned based on their potential overall benefit to the Department's Hazardous Materials Regulations program both in terms of efficient operation and in recognition of the need for sufficient flexibility in allowing affected industries to accomplish the movement of hazardous materials in commerce. This is discussed in more detail in the forthcoming plan referred to in the answers to questions 18 and 19.

REGULATIONS AND ACCIDENT EXPERIENCE

Question 21. Since one of the prime purposes of this regulatory effort is to achieve safety in transportation of hazardous materials, what correlation is made between current and suggested projects, and known transportation accidents that cause death, serious injury, or major property damage.

Answer. Annual and monthly summaries of hazardous materials accidents resulting in deaths, injuries and the need for evacuation of people are regularly provided to MTB supervisory personnel having responsibility for setting rulemaking priorities and executing rulemaking actions scheduled in accordance with those priorities. In this manner, rulemaking priorities and production efforts are adjusted to place the maximum available emphasis on projects where

the need for reduction of deaths, injuries and human disruption appears to be the greatest. For example, as a result of a series of accidents involving uninsulated tank cars, the Materials Transportation Bureau and the Federal Railroad Administration put great emphasis on seeking appropriate regulatory solutions relative to the problem. The regulations promulgated under Docket HM-144 were the result of that effort. While the regulations provided what was considered to be an appropriate time table for the thermal protection, head protection, and coupler retrofits, recent derailments have led the Federal Railroad Administration and the Materials Transportation Bureau to undertake a reconsideration of the time table to determine if accomplishment of the requirements can be accelerated.

APPLICATION OF RESOURCES

Question 22. What mechanism is there to assure that the time and attention of DOT personnel are devoted to materials and problems posing the greatest concern to the public; i.e., how does MTB avoid spending as much time applying regulations to stick matches as to high explosives? To aerosol cans as to tank cars? What risk analysis is provided to assure that small packaged goods are not over-regulated while higher hazard bulk shipments are under-regulated?

Answer. Allocation of available resources to low pay-off activities is a major concern. The Materials Transportation Bureau (MTB) is confronted with a steady parade of narrowly drawn petitions for rule changes or exemptions seeking authority for individual shippers, manufacturers, or carriers to do something different than is authorized by the regulations. More often than not the underlying reason is an economic benefit. There is a great temptation for agency personnel to divert from planned long term and frequently complex technical projects to address the many narrower, technically less demanding and more easily solvable problems of persistent individual petitioners.

It is intended that clear identification of project priorities in the MTB's Regulatory Review and Development Plan coupled with the staff's recognition of management's commitment to those projects over less compelling matters will lead to an institutional discipline that will keep the vast majority of our resources devoted to problems posing the greatest concern to the public.

To avoid over-regulation of small package goods, the MTB has established a new classification, Other Regulated Materials or ORM's, which exempts limited quantities of consumer goods from labeling and packaging requirements. These goods include many common household items such as cleaning solvents and aerosol packaged deodorants which present little hazard in transportation. This action has not been without opposition, however, and has not been fully accepted by the Airline Pilots Association.

UNIFORMITY OF HAZARDOUS MATERIALS STANDARDS

Question 23. What effort is made to assure smooth and safe transportation of hazardous materials under uniform national and international standards adopted under the HMTA, without frustration by divergent standards adopted by carrier groups, state authorities, and international authorities?

Answer. There has been a concerted effort on the part of the MTB and the Department as a whole to assure smooth and safe transportation of hazardous materials under national and international standards. On the national level, we constantly review the regulations on hazardous materials promulgated by the various agencies. This includes regulations published by the Air Transport Association for air shipments of hazardous materials and approved by the Civil Aeronautics Board, by the Uniform Freight Classification for rail shipments of hazardous materials and by the National Motor Freight Classification for motor carrier shipments of hazardous materials. These latter two are both approved by the Interstate Commerce Commission. A group of shippers has recently initiated litigation before the Civil Aeronautics Board questioning the justification for approval of a tariff which contains some provisions for hazardous materials shipments which are at variance with DOT requirements.

On the international scene, we have representatives participating in various committees and subcommittees of the major organizations involved in hazardous materials regulations. These organizations include the United Nations Committee of Experts on the Transport of Dangerous Goods, the United Nations Group of Rapporteurs of the Committee of Experts, RID Experts on Transport of Dangerous Goods by Rail, ADR Experts on Transport of Dangerous Goods by Road, The International Civil Aviation Organizations Dangerous Goods Panel, United Na-

tions Group of Experts on Explosives, the International Atomic Energy Agency's Panel of Experts on Transport of Nuclear Material, the United Nations Working Group on Compressed Gas Cylinders, and various Intergovernmental Maritime Consultative Organization committees. This participation is to present the United States policy position and to coordinate as necessary to assure that United States policy and practices are considered in the development of any world standards.

In enacting Section 112 of the Hazardous Materials Transportation Act, the Congress endorsed the principle of Federal preemption in order to preclude a multiplicity of State and local regulations and the potential for varying, as well as conflicting, regulations in the area of hazardous materials transportation. This Bureau has implemented regulations under 49 CFR Part 107 which provide for preemption by the Secretary of any requirements of a state or political subdivision which are not consistent with requirements promulgated under the Act. Further provisions are made for petitions to the Department by states or political subdivisions to continue in force any requirements which have been determined to be not consistent, provided that it can be shown such requirements do not unduly burden commerce. In this manner, we have established a mechanism for resolving or accommodating many of the differences that exist or are likely to arise between Federal and State or political subdivision requirements.

DELIVERY HOSE FAILURES

Question 24. In the January 1978 OHM Newsletter discussing injuries caused by unintentional releases of hazardous materials, it is stated, "most injuries involving cargo tanks result from spray of the hazardous product when delivery hoses burst." What, if any, effort is being currently devoted by the MTB towards this problem?

Answer. The referenced article pertained only to reports received during September and October 1977. Of the 15 cargo tank incidents reported, four involved hose bursts. Over the past several years, hose failures accounted for less than 10 percent of the cargo tank incidents reported. Presently, our regulations (49 CFR Section 173.33(f)) require that the bursting pressure of all pipe, pipe fittings, and other pressure parts must be at least four times the design pressure of the tank on which it is used. Several years ago, we considered the development of additional criteria pertaining to the retesting of hose. However, we were unable to develop appropriate criteria for the nondestructive retesting of hose. The conventional technique of testing by over-pressurization could, in the case of a hose, reduce its integrity. For this reason, we did not see pressure testing as an acceptable substitute for the currently required visual inspection test.

INTRADEPARTMENTAL COORDINATION

Question 25. Pages 3, 4, and 5 of the January 1978 OHM Newsletter carry a synopsis of carriers' reports. The incidents reported appear to indicate that the conventional technique of testing by over-pressurization could, in the case of a majority of substantial problems in the transportation of hazardous materials involve bulk shipments. In light of the fact that DOT has delegated the authority to issue rules in the area of bulk shipments back to the modal administrations, what, if any, assurances does MTB receive from the various modal administrations that they are addressing these problems?

Answer. Except for bulk shipments transported by tank vessels, DOT has not delegated the authority to issue rules in the area of bulk shipments back to the modal administration. An internal Departmental order specifies that hazardous materials transportation matters peculiar to a single mode of transportation will be dealt with by the cognizant operating administration in terms of evaluation and development, and coordination with the Office of Hazardous Materials Operations. Notices of proposed rulemaking and exemptions are issued by the Director of the Office of Hazardous Materials Operations and final regulations by the Director of the Materials Transportation Bureau. This procedure worked effectively during the development and promulgation of regulations pertaining to the retrofit of tank cars under Docket HM-144. We are engaged in a constant dialogue with the modal administrations through their representatives, and a monthly meeting is held to discuss various projects and issues under consideration. We recognize the need for improvement in this area and are putting greater emphasis on appropriate modal administration participation in the regulatory development program.

ALLOCATION OF RESOURCES

Question 26. How does the MTB assign priorities to assure that the big problems in the area of safety receive a proper allotment of available resources and personnel addressing those problems?

Answer. With regard to the development and issuance of regulatory solutions to "big problems", this is precisely the major purpose of the Materials Transportation Bureau's Regulatory Review and Development Plan discussed in answers to questions 18 and 19. With regard to enforcement, the proper allocation of available resources and personnel is among the matters being considered in an ongoing Departmental examination of hazardous materials enforcement efforts.

LOCAL EMERGENCY RESPONSE

Question 27. Does MTB believe that local firefighting units and emergency response teams are capable of containing major spills involving hazardous materials?

Answer. The Materials Transportation Bureau (MTB) does not believe that most local units could contain major spills of hazardous materials entirely on their own. Assistance of various types is generally required of and often provided by the shippers, nearby industries, military organizations, etc., in amelioration of spills. An ever-increasing number of local jurisdictions are, as a part of cooperative community emergency response planning, attempting to provide for handling and containment of spills. Availability of resources at the local level is a continuing problem. Additionally, there is a need for better guidelines to enable local action in developing such plans.

Question 27a. What, if any, training of emergency response units for the proper handling of hazardous materials spills are provided by the MTB?

Answer. Although the MTB does not conduct such training, it does provide financial and technical support to the Department's Transportation Safety Institute for hazardous materials training, including emergency services workshops. During 1977, 22 of these workshops were held, attended by nearly 1,000 emergency services personnel and state training officials. In addition, the MTB has developed an Emergency Action Guide for Selected Hazardous Materials. The Guide has been provided to fire, police and emergency services organizations during the past five years. Approximately 550,000 copies of the Guide have been distributed to date.

MTB funded a contract with the National Fire Protection Association (NFPA) which has produced a 20-hour self-standing training course to assist those who assume and accept the responsibility for responding to and dealing with transportation accidents involving hazardous materials. This course has been designed to provide guidelines for handling hazardous materials during emergency situations and to assist persons with various emergency services responsibilities in better understanding their roles in the development and implementation of comprehensive and coordinated community emergency action plans.

This course is expected to become available from the NFPA about May 1, 1978. We expect that this course may be used to train more than 500,000 fire, police and other emergency services personnel during the next few years. It will also have the added benefit of being applicable to many non-transportation situations such as LP gas cylinder filling plant emergencies.

SPILL CONTINGENCY PLANS

Question 28. The United States Coast Guard requires shippers of liquefied natural gas and liquid petroleum gas to have a spill contingency plan. What, if any, efforts are being made to develop spill contingency plans by other carriers involved in the transportation of hazardous materials?

Answer. No specific efforts are currently underway to require carriers to develop spill contingency plans for the transport of hazardous materials. The Department, however, has developed and distributes a hazardous materials emergency action guide to provide response information to emergency services personnel who may have to deal with a transport incident involving hazardous materials. The manual outlines the hazards of certain materials and contains technical information which may assist emergency personnel during the first 30 minutes following a spill involving volatile, toxic, gaseous and/or flammable material shipped in bulk. This manual has been revised and reprinted a number of times since its development in 1973 and over a half million copies have been distributed.

Additionally, the National Fire Protection Association, under contract to DOT has developed an emergency services training course. It provides information and guidelines for handling transport accidents, emphasizes on-scene management and control and communication, and the importance of developing contingency plans by local authorities. The course package will be available to the public by May 1978. Development of a followon course dealing with handling of transport incidents involving radioactive materials is being initiated.

LIABILITY RELATING TO HAZARDOUS MATERIALS ACCIDENTS

Question 29. With respect to disasters involving the accidental release of hazardous materials, who should be held responsible for damages resulting from such accidents?

Answer. Financial responsibility for such damages is usually assessed under a finding of liability according to State law, which may involve a consideration of whether there has been compliance with regulations issued under the Hazardous Materials Transportation Act (HMTA). Other substantive Federal and State laws may also be considered, especially those concerning product liability, and, in certain circumstances, the Federal Water Pollution Control Act. Finally, the support of socially desirable ends—that the injured be recompensed—may also find expression in assigning financial responsibility.

Fixing the identity of those who must satisfy damage claims from a hazardous materials incident is important under the HMTA only insofar as it contributes to transportation safety. Our practical concern is that those persons who are in a position to prevent, or to correct unsafe conditions, do so. Any assignment of financial responsibility that produces this result is acceptable. Procedurally, a high degree of certainty as to financial responsibility will probably encourage better emergency preparation by those bearing that responsibility.

PREVENTION OF SABOTAGE OR HIJACKING

Question 30. Some critics of the manner in which hazardous materials are handled, transported and stored allege that inadequate attention has been devoted to the prevention of sabotage or hijacking of shipments.

Question 30a. Does MTB believe this is a potentially serious problem?

Answer. Except for the recent accident in Youngstown, Florida, involving a suspected intentional derailment of a train transportation hazardous materials, sabotage and hijacking of shipments of hazardous materials have never been made statistically evident. In a recent report on the control of explosives prepared by the Senate Subcommittee on Criminal Laws and Procedures, it is stated that "Although the hijacking of trucks is a major problem nationally, it has up until now not been a problem with interstate or intrastate shipments of explosives." The report suggests that vehicles transporting explosives should be properly secured to prevent theft while they are stopped enroute to their destination. The Bureau believes that some security should be provided for certain kinds of materials during transportation, particularly certain kinds of explosives and radioactive materials. The present regulations (49 CFR Part 397) require that explosives A and B be attended at all times during transportation by highway by the driver of the vehicle or another qualified representative of the carrier. We may find that similar requirements are appropriate for other substances if the risk of sabotage or vandalism becomes more evident.

Question 30b. Who should be responsible for developing procedures to reduce the potential for these incidents occurring?

Answer. Currently the Federal Bureau of Investigation administers certain statutory authorities pertaining to the sabotage of transportation facilities. While there are a number of statutes applicable to the hijacking of shipments in interstate or foreign commerce, no agency presently holds authority to issue *mandatory* regulations pertaining to transportation security by highway or rail, except possibly in the name of transportation safety. At the present time, the Department's Office of Transportation Security issues *advisory* standards pertaining to cargo security. However, a Bill (H.R. 1157) entitled "The Cargo Security Act of 1977" has been introduced in the House of Representatives proposing regulation by DOT and the Department of the Treasury in the area of cargo security. Should this or similar legislation be enacted, we would assume that the authority vested in a Federal agency to issue mandatory regulations pertaining to cargo security, would include authority to deal with security matters pertaining to the transportation of hazardous materials.

Question 30c. What is MTB doing in this area?

Answer. The Materials Transportation Bureau does not have any ongoing activity. However, as noted in the answer to question 30b, its sister element in the Research and Special Program Directorate, the Office of Transportation Security, currently develops and issues advisory cargo security standards (49 CFR Part 85).

OPENING STATEMENT BY SENATOR SCHMITT

Senator SCHMITT. Mr. Chairman, I would like to make a few quick comments, in view of a major discussion in progress in New Mexico. It relates to the whole country and has to do with nuclear waste management; the issue is whether or not the area near Carlsbad, N. Mex., is going to be utilized as a temporary and potentially permanent disposal site for nuclear waste. The waste isolation plant that is being planned by the Department of Energy under the management of the Sandia Corp. for the Department of Energy is an experimental plant at this time.

The clear indication is that the Department of Energy would like to move toward some future time when there would be permanent disposal of nuclear waste in this area.

I think that the hearings this morning are particularly appropriate because one issue that has probably been inadequately addressed is the transportation of nuclear waste materials to points of disposal; or, what is certainly more esthetically satisfying to me, points of further utilization.

Today's waste is tomorrow's resource. I hope that the witnesses today, either in their prepared remarks or in answers to questions, will address themselves to this particular problem and particularly tell me whether or not they are working hand in hand with the Department of Energy on the issue of nuclear waste management.

Thank you, Mr. Chairman.

Senator DURKIN. Our first witness this morning is James B. King, Chairman, National Transportation Safety Board.

STATEMENT OF JAMES B. KING, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD; ACCOMPANIED BY LUDWIG BENNER, CHIEF, HAZARDOUS MATERIALS DIVISION, NATIONAL TRANSPORTATION SAFETY BOARD

Mr. KING. Mr. Chairman, members of the committee, first, if I could partially respond to Senator Schmitt's concerns, Senator, this morning I—there hasn't been any indication. The whole matter of radioactive materials is a highly specialized area within Materials Transportation Bureau and DOT, and its relationship with the Department of Energy. I really don't have anything in my prepared remarks to address that, and I haven't done the kind of research that you're entitled to, to respond to your concerns.

I would have that prepared for the record if it were helpful.

Senator SCHMITT. It would be very helpful for me, Mr. King. I certainly hope that you will do that.

Mr. KING. We will, Senator.

Senator SCHMITT. You need not digress this morning, but you know my concern about it. I think that future material for the record and future discussions between us would be extremely helpful.

Mr. KING. Absolutely. Thank you.

[The following information was subsequently received for the record:]

We are not working "hand in glove" with the Department of Energy on the issue of nuclear waste management. However, we are—with very limited resources—attempting to keep current with these transportation developments to determine that they are not generating unreasonable transportation risks.

We have observed that the safety record with nuclear waste transportation is unusual in the hazardous materials field for two reasons. First, the harm from radioactivity that has occurred during transportation to date appears to be miniscule. Secondly, more analytical, testing and control efforts to assure minimal risks have been devoted to this transportation than to any other hazardous materials ever shipped. These efforts dwarf all other hazardous materials transportation safety assurance activities.

We don't want to convey the impression that nuclear waste transportation poses zero risk. It does create risks. Congress foresaw this when it passed the Price-Anderson Act and stimulated development of nuclear energy. Some uncertainties remain, despite all the analytical, testing, and control efforts. The Safety Board would like to see these discomfoting uncertainties clarified. For example, verification of some of the assumptions about expected accident scenarios seems prudent and practical. However, it does not seem necessary to abandon this activity until these remaining uncertainties about risk levels are clarified, given the extensive safety work already completed for these materials.

Senator SCHMITT. I would encourage you to add your expertise and that of your Board to these deliberations. I think that even though we may find an absolutely safe way to dispose of this waste or at least temporarily store it until we utilize it; if we haven't figured out an assured way to continue to transport large amounts of it on a regular basis, then we really haven't done anything.

Senator DURKIN. I might add you're welcome to store it in New Mexico until we do resolve the problem.

Senator SCHMITT. Unfortunately, that is the attitude of almost every other State, including maybe New Mexico. So we do have a problem. That is why I think, Mr. Chairman, the utilization issue is so important. This is a tremendous future resource in many different ways. To automatically assume that we are going to dispose of it permanently, is probably the basic mistake we have made for many, many years.

Mr. KING. I do want you to know that I welcome the opportunity to be here with you today to discuss some of the issues concerning the transportation of hazardous materials.

As you and members of the committee know, the Safety Board 2 weeks ago concluded public hearings on derailments and the carriage of hazardous materials as related to the 112A/114A jumbo tank cars. This hearing provided the Safety Board an opportunity to examine the Hazardous Materials Transportation Act as it is being administered by the Materials Transportation Bureau.

As you know, the Safety Board supported passage of the Hazardous Materials Transportation Act. In the act, Congress provided the DOT with a strong and clear mandate and the statutory tools to do the job. We looked to the Materials Transportation Bureau to provide

the leadership to fulfill the promise of the act. The Safety Board has been disappointed by the Materials Transportation Bureau's failure to carry out, as we understand it, the congressional intent expressed in the act. This morning I would like to discuss briefly five areas in which the Safety Board believes the Materials Transportation Bureau has been deficient in carrying out its assigned responsibilities.

First, the Materials Transportation Bureau has failed to publish safety guidelines to identify accident risks before a catastrophe occurs.

Second, the Materials Transportation Bureau has refused to establish a central data system to provide information and advice to firefighters and local safety personnel.

Third, the Materials Transportation Bureau has refused to register bulk carries of hazardous materials.

Fourth, the Materials Transportation Bureau has permitted its exemption procedures to become a free-for-all for the hazardous materials industry.

Fifth, and finally, the Materials Transportation Bureau has declined to become a leader in developing new emergency response techniques.

The Safety Board's first concern is the Materials Transportation Bureau's failure to adopt and publish safety guidelines to identify accident risks before a catastrophe occurs. In passing the act, the Congress did not attempt to legislate perfection. The act recognized that hazardous materials must be moved. That in an imperfect world even with the best possible safeguards, some accidents unfortunately will still occur.

The act places transportation safety in a risk context. It directs the Secretary to identify unreasonable risks and preventive measures. A number of analytical techniques have been developed to identify major risks before a catastrophe occurs. Failure mode and effects analysis, fault-free techniques and hazardous analysis, to mention a few. In March 1976, as a result of its investigation of the explosion in Burlington Northern's Wenatchee, Wash., yard, the Safety Board recommended that the Materials Transportation Bureau publish and adopt safety guidelines to identify risks for a variety of hazardous materials.

More than 2 years later, and no such guidelines have been published.

Our second area of concerns is the Materials Transportation Bureau's refusal to establish a central data system to provide information and advice to local firefighters and safety personnel. The Safety Board believes that the Congress made its desires known in section 109(d)(2) of the act, which requires that the Secretary, and I quote, "establish and maintain a central reporting system and data center so as to be able 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 and Materials Transportation Bureau responses."

The Safety Board has recommended that the Materials Transportation Bureau redesign its incident-reporting system, now primarily limited to container performance, to develop lessons learned from the handling of hazardous materials incidents.

We won agreement from the Materials Transportation Bureau that the idea was a good one, but we have yet to see any change and it's been a year and a half.

Because of a reluctance to act here in Washington, safety lessons are not being shared with those throughout the country who are exposed to the greatest personal dangers when an accident occurs, the local firefighters and safety officials. None of the many parties publishing emergency-handling information has enough data to evaluate the usefulness of their information.

Can we learn from the tragedies of the past or are we condemned to repeat them?

The third area in which the Safety Board has not been satisfied with the Materials Transportation Bureau performance is its refusal to register bulk LPG carriers under section 106(b). The Materials Transportation Bureau has a good drum registration program, but has refused to accept the Safety Board's recommendation to register bulk carriers. We believe carrier registration would help prevent catastrophes such as Eagle Pass, Tex., in which a vaporized LPG killed 16 and injured 35. Bulk carrier registration would have several advantages. The Materials Transportation Bureau could prescribe and enforce similar safety standards for all carriers in an attempt to deprive the unsafe carriers of competitive advantages enjoyed at the expense of safe carriers.

Because senior company officials would be required to execute a statement of compliance, they would be less tempted to blame lower level employees for unsafe practices, a practice this Board, the Safety Board, has seen on several recent investigations with a comprehensive list of carriers. Safety and technical information could be quickly disseminated.

The Board's fourth area of concern is the Materials Transportation Bureau's policy governing exemptions from hazardous materials regulations. As we read section 107 of the act, Congress did not intend that these exemptions be lightly granted. Before an exemption is granted, the act directs that each petitioner perform a safety analysis as prescribed by the Secretary. We do not feel that exemption evaluations as now performed meet the intent of the act. Exemptions as now performed meet the intent of the act. Exemptions have become an economic free-for-all. Exemptions granted for one company expand almost automatically into exemptions for every competitor. Almost automatic exemptions for construction and modification of uninsulated tank cars is a case in point. And one for which the public continues to pay a heavy price. In 1971 and again in 1975, the Safety Board issued recommendations to tighten the exemption process. Today the policy is unchanged.

Our final area of concern is emergency response. During our hearing, testimony indicated that there is vigorous activity but little coordination. Four systems disseminate technical information, the Materials Transportation Bureau distributes a handbook which addresses only the first 30 minutes of a hazardous materials emergency and includes only 42 products.

The Association of American Railroads, Bureau of Explosives, issues several handbooks. The National Fire Prevention Association distributes a handbook and the Manufacturers and Chemists Association has an on-line CHEMTREC one-call system which meets some needs.

A number of public witnesses called for a stronger Federal role and offered specific suggestions for the help they need. Several witnesses asked for a national one-call system to provide local officials with immediate technical information in the event of an emergency. Other State and local officials recommended that the Federal Government set minimum requirements for a hazardous materials response center in every State and training standards for emergency personnel.

Another public witness asked for a Federal hazardous materials emergency team to assist local officials in fires or explosions beyond their capabilities.

As we listened to the representatives of firefighters and State and local emergency response personnel, we were encouraged by their innovative and creative approaches, all of which were worthy of serious consideration. But the Materials Transportation Bureau did not appear as a participant in this work, much less as a leader. One firefighters' representative who spoke for 2,100 fire department training centers testified that they used a Bureau of Explosives curriculum. One major State emergency response coordinator testified that he never heard of the Materials Transportation Bureau.

The issues I have discussed, safety guidelines, data reporting, bulk carrier registration, exemption procedures and emergency response are those which have concerned the Safety Board for several years. We raise them not to accuse but to see your guidance. Is the situation I have described what the Congress intended when it passed the Hazardous Materials Transportation Act?

If it is, I apologize for taking the committee's time this morning, but if it is not, then the Safety Board intends to continue pressing for change under the guidance and direction of this committee and other congressional bodies.

I would like to thank you for allowing me to testify this morning, Mr. Chairman, members of the committee.

I would be pleased to try and respond to any questions you may have.

Senator DURKIN. Thank you, Mr. King. I appreciate your statement. The committee is concerned. Your statement is very direct and very forceful, and I hope we get some answers today, if possible; if not, fairly soon.

This CHEMTREC system—is this an industry system?

Mr. KING. That is correct, Mr. Chairman.

Senator DURKIN. I think if I understand it correctly, I thought the DOT was supposed to set up an emergency information system and not rely on an industry system.

Mr. KING. That's what we understood. CHEMTREC handles certain kinds of problems, but according to the firefighters and emergency personnel we have talked to, it doesn't deal with an awful lot of the real life situations they find themselves in when they arrive at a particular type of configuration or emergency situation.

What they need is some immediate kinds of help and assistance because you have an opportunity to look at many of these catastrophic events in the context of a national picture.

In many of these communities it is a first and only time event, so the learning process isn't there. They need to reach out, ask for technical help. Most of them have been briefed on how to handle it, but

there always seems to be unusual ingredients, and quite frankly, that doesn't seem to be available to them, at least by their testimony.

Senator DURKIN. Based on your experience and your interpretation of their role, would you care to list what you think are the major deficiencies in the CHEMTREC system and what additional efforts should be undertaken by DOT?

Mr. KING. I think one of the things as I understand the CHEMTREC system, when you call in they will deal, you know, you have to first know what the product is. They will go through a flip card file and recite to you what is printed on that card.

Now, if you are a fire lieutenant or fire captain or deputy chief calling in from the field, let's say you have vinyl chloride in Houston, Tex. You have a rupture of a 112A tank car. This thing is burning, you are getting possibly toxic smoke. One of the questions you may have, will three 2½-inch lines cool the tank enough so that it won't BLEVE on me, which is a very reasonable kind of question. By the way, that happened because the chief didn't have anywhere to turn, he wasn't certain of the product, he didn't understand what would happen with a BLEVE, he didn't know what kind of cooling he needed to avoid that kind of explosion. So that is the kind of information you can't get.

They will tell you what is on the cards if you call. We will take Florida, for example, Pensacola. I have an anhydrous ammonia rupture. CHEMTREC will tell you about anhydrous ammonia, and they will basically recite to you what the particular product is or what item, what to look for.

You know if it is burning there is one method of attack. If it is merely leaking and, therefore, going to spread depending on wind and weather, that you can use a certain type of fog spray to attack that. CHEMTREC handles each one of them, though, based on cards and the knowledge they are reading over the phone.

Most of it is based on a printed response because I believe there is a question of liability, Mr. Chairman, so that there isn't the sort of interpretative help you might need. I don't know how many firefighters know precisely what type of tank cars are moving. Sometimes product labeling is difficult to pick up in a jumble of freight cars. It could be a truck accident such as in the Eagle Pass situation, which was really catastrophic.

Senator DURKIN. Oftentimes I gather these are not the most sophisticated fire departments.

Mr. KING. In many cases we are talking about volunteers, we are talking about people who really want to serve their community, and they literally put their lives on the line, Mr. Chairman.

Most of, I am thinking of upstate New York, we had a really good size BLEVE out in the rural area. There were 57 people injured, 50 of them were firefighters.

Senator DURKIN. The chief got killed in one of them.

Mr. KING. In Waverly, Tenn., the chief of the fire department and chief of the police department were both killed onsite in the line of duty. The firefighters go in there and literally confront every situation, whatever it is.

Senator DURKIN. I don't think either of us intends to criticize those fire departments, but I think the point is that those departments need

assistance and they need it quickly, and they need leadership and adequate information on the spot just as soon as possible.

Mr. KING. That is our feeling, Mr. Chairman.

Senator DURKIN. Do you think the MTB has the technical expertise to provide that immediate on-the-spot emergency information?

Mr. KING. I don't know their distribution of personnel. I believe they are mandated to provide a service. I don't know what their appropriation is, and I don't know what they have asked for internally.

We wish to be supportive to them if they will move ahead. The first thing we are trying to get is the first step, the willingness to do this. Does it need to be done? We are firmly convinced it needs to be done.

Senator DURKIN. That is a lot more than sitting there and stamping exemptions, I would think.

Mr. KING. I would think so, Mr. Chairman.

Senator DURKIN. I hope that you continue to speak out in these areas. I for one, and I am sure I am speaking for the Senator from New Mexico, appreciate the fact that you have spoken out. And I hope you will continue to do so. You can provide us with a lot of assistance and a lot of guidance.

As you know, the trouble sometimes in the Congress is we don't move until we see something happen on the 6 o'clock news, and everyone stumbles over themselves to rectify the problem that has been ignored for many, many months or years.

So I hope you will keep our feet to the fire, because it looks like we will finally get through the canal today so we can start concentrating on some other things. I commend you for speaking out and I would urge you to continue to do so.

What about the placard system. I took a quick look this morning and they look like props from Sesame Street. I am sure you have seen them.

Mr. KING. You could find that on an anhydrous ammonia tank car.

Senator DURKIN. It was on one of the cars in one of the recent accidents.

Mr. KING. Yes; you could. That is one of the problems, getting information to the local folks.

The Missouri Pacific, and now the L. & N., and again it has been the private sector, have developed a computerized printout list that I think is extremely useful that each member of the crew carries. It has the car numbers, a description of the product and what the response should be if it is ruptured, if it is burning, if it is next to another car so that the fire department can at least have an idea of the product.

You have no idea if you ran into that first of all. Green to most people indicates go. The one thing you shouldn't do is go into an area where there is leaking anhydrous ammonia. It is a toxic gas and in many cases it is fatal if inhaled.

If it is burning it is also a serious matter. It will burn but it is not highly flammable.

Senator DURKIN. What in God's name is this supposed to be? ["flammable solid" placard]

Mr. KING. You would have found that, well, you wouldn't have found any pieces that big, but—

Senator SCHMITT. Would that be on wood?

Mr. KING. Well, actually that one was an explosives car. They had a chemical car on a train out in Burlington Northern's Wenatchee

Yard. When it exploded they didn't pick up too many big pieces after that explosion. It killed several people as we mentioned. There was over 7½ million dollars' worth of damage from a car with that placard on it.

Senator DURKIN. I took at least 1 year of chemistry. What in God's name is organic peroxide?

Mr. KING. Well, that would have been—that has a tendency to explode under certain circumstances, and has. Again yellow in the common vernacular. I am back to firefighters and emergency people, they see a yellow, that means caution but it is not the same kind of response again in an emergency situation. Potentially it is an explosive under heat.

If it is near a source of heat you can have a substantial explosion. When we are talking about these, as you know, Senator, we are talking about bulk so you are talking 10,000-plus gallons in one central location.

So you really have an enormous potential.

Senator DURKIN. I gather the bottom line is that you feel the placards are essentially useless?

Mr. KING. No; I think they are a step forward, Senator. As with anything, they can be improved. It has a way to go. I don't see it as an end-all. I don't want to dismiss it completely, but I think there are going to have to be areas where we start to talk with the people who are going to be dealing with these kinds of problems, rather than talking to the professionals in the field.

When I say professionals, all too often it is one chemist talking to another rather than dealing with a local emergency response team or with railroad workers themselves. That is who generally have to deal with the emergencies.

So we are talking about folks who are knowledgeable, yet may not have the needed level of technical sophistication. I know I couldn't go through all the placards right now and give you an instantaneous recapitulation of them all.

Senator DURKIN. I gather this one may well actually be misleading.

Mr. KING. Yes; I mean that is what leads you to misinterpretation. You can look at that, you know it is under pressure and it is a non-flammable gas under lower temperatures, yet it will kill you. It is toxic.

So, there is no indication that the gas that is in there in fact is dangerous. When I say dangerous I am talking about fatal. When that was released in Pensacola it killed a physician right on his front lawn as he was fleeing out of his house. His wife was overcome, she was dragging their young child and the child outran the cloud, but the mother was stricken and died just a few weeks ago.

Now, we have a child without any parents down in Pensacola on a tank car that very well was placarded with that placard.

Senator DURKIN. Would you provide for the record your interpretations and recommendations on all the placards?

Mr. KING. Yes, Mr. Chairman.

Senator DURKIN. Because I gather these are supposed to be helpful. You take a quick look in an emergency situation, and it is supposed to give you guidance, it is supposed to be easily understood by the people in the field, the firefighters, and the personnel involved.

So I would appreciate for the record your comments and recommendations with respect to each of the placards.

Mr. KING. Those will be forthcoming, Mr. Chairman.

[The following information was subsequently received for the record:]

DOT took a classification system designed for grouping regulatory requirements and used it to try to solve an emergency handling problem for firefighters. It doesn't tell firefighters what they need to know to cope with hazardous materials emergencies. Firefighters need to know how the hazardous materials present in an emergency is expected to behave so they can act to reduce the expected harm. DOT placards do not give them this information. Shipments classed as flammable solid, organic peroxide and flammable gas have detonated just like shipments placarded explosives. Anhydrous ammonia shipments, which were toxic to victims in accidents, carry a green compressed gas placard. Chlorine used to carry this compressed gas placard until two years ago, when the special "Chlorine" placard was adopted. Dangerous has value, because it warns firefighters to get more information. The oxidizer placard and pictograph do not portray the violent reaction potential of these materials.

None of the placards identify the degree of danger present because of the quantity of material present or the lethality of the material for emergency handling purposes.

Some sort of placarding system that tells firefighters what behavior to expect may be useful for handling minor leaks and spills or accidents where public safety officials have plenty of time to get more information and work out their response actions. For shipments and accidents where the material or its container pose special problems, alternative approaches are needed. This is the reason the Safety Board asked that hazardous materials emergency squads be developed. Another method for communicating such information is the use of color stripes on vehicles; for example, cars carrying hydrocyanic acid, an extremely dangerous poison, are painted white with easily recognized 10 to 12 inch white red bands around the tanks.

In England this method has been used to identify oxygen tank vehicles. There are probably other good approaches, but DOT has to acknowledge the shortcomings in its present classifications-based approach before improved options are given serious consideration.

Senator DURKIN. Would you favor a uniform numbering system for placards that would provide more specific information as well?

Mr. KING. It might be helpful in any one situation because we are talking about a variety of accents and pronunciations. When you get into new chemical products, we are talking about 1,500 of them. Some are very similar in sound but very, very different in their chemical components. With numbers, sometimes reciting those the chances for error could be reduced on just pronunciation when someone in a central place, say, in Chicago or New York hears someone from Mississippi calling them in.

There is an opportunity for misinterpretation. A numbering system might be clearer. You could still have words there that would be helpful to folks but you could then have the key number which could be included, say, with the train or trucking bills of lading so they would be available to the folks on the scene.

The problem has been getting information on the scene. It seems many times everybody has information except the participants.

Senator DURKIN. You indicated that recent testimony before the Safety Board led you to the conclusion that the MTB is providing no leadership role to firefighters and local emergency personnel. To what do you attribute this failure to provide leadership and how would you suggest improving the MTB performance?

Mr. KING. I think the thing that struck us when we were talking with a cross section of folks was that no one seemed to look to MTB for leadership. Nobody seemed to look to them as a resource. The most striking one was the gentleman who came in and spoke for the training side of the firefighters, that represented 2,100 different training units. He said they train the majority of firefighters in this country. He said they didn't look to MTB at all, they really kind of looked to the Bureau of Explosives and others to help build their curriculum. On what they could do, certainly MTB would be in a better position to respond to that question. I would like to leave it open, Mr. Chairman. I don't mean to be presumptuous.

Senator DURKIN. Fine.

The MTB has provided us with their "First Annual Regulatory Review and Development Plan and Schedule for Rulemaking Actions."¹

If you don't have a copy of this, we will give you one. For the record could you give us your conclusions and recommendations?

Mr. KING. We will, Mr. Chairman.

I don't have a copy. We will pick one up.

[The following information was subsequently received for the record:]

Based on the needs we see and on the apparent impact of their rulemaking on transportation safety, the MTB's development plan and schedule for rulemaking could be significantly improved.

With its limited resources, MTB should concentrate on projects that will produce the greatest reduction in hazardous materials transportation risks. We note, for example, that hazardous waste transportation standards are the only regulations considered major, while acceleration of the DOT 112A/114A tank car retrofit program with its acknowledged great reduction in catastrophic risk is considered a "non-major" regulation. The inordinate bi-monthly attention to conversion of exemptions while development of safety analysis guidelines—which would multiply the effectiveness of both the DOT and private sector safety efforts—languishes with no target date in sight. While firefighters plead for help with their hazardous materials emergency response problems, DOT's only rulemaking is to make mandatory most railroads' practices of train crews furnishing firefighters with shipping information. We see no indication of any attempt to expand a compliance assurance and registration program to higher-risk bulk hazardous materials.

Senator DURKIN. I am sure we will have more questions, but we will more than likely have to submit them in writing for your response.

Do you have any questions?

Senator SCHMITT. Thank you, Mr. Chairman.

I may have some for the record. I just might mention that one reason why the private sector is leading the Federal sector in this area is that they not only have the liability issue to be concerned about but also the cost of their particular operations. It doesn't surprise me that they are thinking ahead of us on this matter.

Also, if you do get into consideration of numbers to identify various hazardous materials, I suggest you also consider the use of call signs, easily identified and distinguished words or made up words. NASA and the Air Force almost never use numbers to identify themselves or planes or things like that. They tend to use a call sign such as tango or bravo, because it is easy to remember. It is hard to remember a number and distinguish one from the other but a call sign is much

¹ See p. 81.

better memory jogger. It can be of use not only in a central facility but also out in the field.

I am also drawing again on the NASA-Air Force experience that I have had. I would hope that in your friend of the court deliberations relative to disaster prevention and control once it occurs, consider the possibility of an AFA national disaster control center that would not only provide data upon call, but would be able to provide, based on the facts of the situation, rapid centralized analysis.

Mr. KING. Exactly.

Senator SCHMITT. Having tried to anticipate various types of disasters, doing the simulations, understanding how to react rapidly in what we call real time, to a developing situation in Silver City, N. Mex. or in Manchester, N.H. or wherever it happens to be, it is most essential to have some people who have been through these kinds of things at least in simulation, and who can jump on the issue and provide rapid continuing information. If the situation is one which permits it in terms of time, there should be a specialized strike team that could go to that scene and provide the expert service that a local disaster group may require. I don't think it would be necessarily a very expensive operation. I think it is just the question of having it in place, having the simulations occurring on a regular basis, define the level of difficulty at which this team would then come into play, and make sure that the people around the country understood that it was available.

I would like to have your comments on that kind of concept. It is one which we used in much more local situations within the space program and also within the military, whether or not it can be applied on a national scale, what its cost would be, what its structure ought to be, and where its location ought to be are issues that I haven't even thought about.

I think it is something that we should consider as we move into an era when more and more hazardous materials, nuclear and otherwise, are going to be moving along our transportation system. If you have any comments I would appreciate it, otherwise we can accept them for the record.

Mr. KING. We couldn't agree with you more. You have said it more eloquently than we could, Senator. That is what we are calling upon the Materials Transportation Bureau to look at. We have been asking them now for some time to do this. You have hit the nail right on the head, sir.

Senator SCHMITT. I would see it as something that could be more effective if it were a cooperative effort between the Government and the private sector. Where, for example, a major proportion of the personnel available would be private sector personnel on a rotating basis as part of this team.

The most essential ingredient is simulation, understanding the kind of situation, even if it varies in detail from one you simulated, still having gone through the process makes you much better able to react, to save lives, to mitigate a situation that otherwise will get out of control particularly when you realize that most of the places where these disasters occur are places where the local people have no way of ever understanding 1,500 different types of materials. A million different combinations that could develop whereas a centralized team can han-

dle that kind of situation, can develop it, can understand and develop the computer programs, as well as just the checklists. When you get into a problem, it is important to rapidly give a response and mitigate it at least until you can get a team out in the field that would help. The number of these kinds of instances will always be such that a relatively small group of people can handle it provided you set the standards of what a local group can handle.

The questions of the chairman having to do with labeling, access to what the label means, what the call sign or number means is the primary way in which I think you handle 99 percent of the cases.

But the other 1 percent such as you describe in your testimony, I think, could benefit very, very much from this centralized assistance.

Thank you, Mr. Chairman.

Senator DURKIN. Thank you.

Ed, do you have any questions?

Senator ZORINSKY. No.

I would like to compliment the committee for taking upon themselves to ask some probing questions in this direction.

As the Senator from New Mexico pointed out, as we continue to develop our various fields of scientific endeavors we are going to be confronted more and more with the shipment of this type of material.

With the derailment experience we have had in the past and with the additional frequency of shipments that will occur in the future, I think it is a situation that needs very definitive solutions in order for us to assure the safety of life and property for the future.

Thank you, Mr. Chairman.

Senator DURKIN. Thank you, Ed.

Thank you, Mr. King. Appreciate it very much.

Mr. KING. Could we enter one thing into the record, which is our recommendations over the past several years to the Materials Transportation Bureau just for the record?

Senator DURKIN. Without objection.

Again, I think I speak for the entire committee. I want to commend you on your performance at the Board. Keep it up.

Mr. KING. Thank you, Senator.

Senator SCHMITT. Mr. Chairman, I think I have a greater right to say that than anyone having opposed Mr. King's original nomination.

I have heard nothing but good reports and look forward to having him help us in this committee for many years to come.

Mr. KING. Thank you, Senator. Thank you, Mr. Chairman.

Senator DURKIN. That presumes we will all be here.

[The material referred to follows:]

SAFETY RECOMMENDATION STATUS—INTERMODAL

Recommendation No.	Date issued	To	Subject	Response due	Response received	Evaluated	Letter sent	Meeting
I-71-1	May 4, 1971	DOT	24-hour central surface accident report receiving point. Coordinate and disseminate information.		July 7, 1971—Secretary DOT surveyed modal administrators and found that all felt existing system of notification acceptable.	June 9, 1976—Closed—No longer applicable.	No	No.
I-71-2	Aug. 17, 1971	HMRB	Amend 49 CFR 170.15(b) to limit hazardous materials special permits.		Dec. 9, 1971—Current practice is sufficient. Public Law 93-533, title 1, sec. 107(a) registers 2-year limit.	Feb. 7, 1975—Closed—Acceptable action.	No	No.
I-71-3	.....do	HMRB	Monitor special permits to gather information to support regulatory action.		Dec. 3, 1971—Special permits are filed and reports are filed and field problems during life are monitored. Field invest. may be possible in future.	.....do	No	No.
I-71-4	Aug. 18, 1971	DOT	Develop and publish comparable data on losses/loss rates for freight transportation in all modes.		Oct. 11, 1972—DOT agrees that information would be useful, questions validity of intermodal comparisons then agrees again.	June 9, 1976—Closed—No longer applicable.	No	No.
I-71-5	.....do	DOT	Consider safety in the formulation of national transportation policy.		Sept. 17, 1975—Statement of National Highway Transportation policy published.	.....do	No	No.
I-72-0	Jan. 21, 1972	State Department	Change U.S. position at International Convention for Intermodal Containers to reflect limited safety purposes of Convention.		Various dates—Copies of changes in U.S. position.	May 2, 1975—Closed—Acceptable action.	No	No.
I-72-1	May 26, 1972	DOT	Require safety impact statements for DOT actions.		Summer 1972, December 22, 1972—Published in trade and labor magazines. DOT fears going too far and losing sight of economic and technical factors.	June 9, 1976—Open—Unacceptable action.	No	No.
I-73-1	March 21, 1973.	DOT	Work with other agencies to develop accurate, comprehensive accident cost data.		September 28, 1973—A study is required to establish definitive criteria for cost data.	June 9, 1976—Open—Acceptable action.	No	No.
I-73-2	August 18, 1973.	FAA	Begin study effort for plane-mate vehicle to assess risks and hazards.		August 29, 1973—FAA is compiling. Safety study effort will be undertaken. (No action taken.)	June 6, 1976—Closed—Unacceptable action.	No evidence	No.

Item No.	Date	Organization	Description	Current Status	Next Action	Date	Frequency
1-75-1	April 13, 1975	USRA (railway association).	Evaluate safety impact of "final system plan," impact evaluation should be part of plan submitted to Congress.	September report to "final discussion plan" has short title and short study on safety.	November 15, 1975—Closed—Acceptable action.	No.	No.
1-75-2	do.	Rail Service Planning Office of ICC.	Consider impact of USRA preliminary systems plan on safety.	April 28, 1975—RSPO evaluation of systems plan has only 1 short paragraph on safety.	November 15, 1975—Closed—Unacceptable action.	No.	No.
HM-75-1	September 25, 1975	DOT	Prescribe content and form for safety analysis statement for exemptions to MTB regulations.	June 1976—OHM newsletter states that MTB will undertake task to formalize format and methodology of safety analysis.	May 23, 1977—Open—Acceptable action.	March 21, 1977	Quarterly meetings April 27, and August 30, 1977.
HM-75-2	do.	DOT	Require submission of safety analysis statements in exemption application.	October 14, 1975—107.103(b) (4)-(7) and (9) cover safety analysis statement requirement.	do.	No.	do.
1-76-1	March 3, 1976	DOT	Require examination of risks for proposals to transport detonable materials.	June 1, 1976—Current practices fill part of the problem. A more detailed program of detonable material accountability will be established.	June 24, 1976—Open—Acceptable action.	No.	Quarterly meeting August 30, 1977.
1-76-2	do.	DOT	Publish guidelines for safety analyses to discover detonable risks. Standards to be met in proposal.	June 1, 1976—Many systems available—no one best. MTB is continuing study. Must be evaluated before rulemaking.	do.	No.	Quarterly meetings April 27, and August 30, 1977.
1-76-3	do.	DOT	Amend 49 CFR 173; in establish appropriate explosive classification procedures to address ways detonable material could explode.	June 1, 1976—MTB will continue review of classification system. Will refine safety analysis methodology. Much R. & D. on subject.	do.	No.	do.
1-76-4	do.	DOT	Establish regulations for quality and quantity control in manufacture, packaging and handling of detonable materials.	June 1, 1976—Existing regulations should cover recommendations. Product quality control is covered by the safety analysis study.	June 24, 1976—Open—Unacceptable action.	June 24, 1976	do.
1-76-5	June 21, 1976	DOT	Research new ways to reduce injuries and damages due to liquid flammable gas released from pressurized bulk transport vehicles.	Sept. 21, 1976—Study will be initiated for liquefied pressurized gases and other materials such as liquefied ammonia.	Open—Acceptable action.	Apr. 21, 1977	No.
1-76-6	do.	DOT	Require safety registration statements for transportation of bulk LPG.	Sept. 21, 1976; June 13, 1977—Present reporting provisions of 49 CFR 177-824(f) is adequate for registration. No action will be taken.	Oct. 7, 1977—Closed—Unacceptable action.	Apr. 21, 1977, request reconsider.	Quarterly meeting August 30, 1977.

SAFETY RECOMMENDATION STATUS—INTERMODAL—Continued

Recommendation No.	Date issued	To	Subject	Response due	Response received	Evaluated	Letter sent	Meeting
I-76-7	June 30, 1976	Commerce Department.	Develop firefighting procedures to minimize duration of fire danger in LPG accidents.	-----	Sept. 16, 1976—Working with DOT to develop project for testing of new training courses in hazardous materials handling in emergency agencies. Sept. 16, 1976—Same. (See R-75-19—Head shields and couplers.)	May 23, 1977—Open—Unacceptable action.	Oct. 1, 1976, to MTB to acknowledge DOT role.	No.
I-76-8	June 30, 1978	.....do.....	Communicate to fire services specific procedures for safe handling of rail transportation emergencies.	-----	-----	.....do.....	.....do.....	No.
I-76-9	Oct. 20, 1976	DOT	Generate information as to actions taken, why, and effect of action.	-----	-----	Open—Unacceptable action.	Feb. 24, 1978, to DOT requesting.	Quarterly meetings Apr. 27, and Aug. 30, 1977.
I-76-10	.....do.....	DOT	Develop procedure to report, information to Federal and State agencies responsible for emergency training.	-----	-----	.....do.....	Affirmative action on these 3 recommendations.	Do.
I-76-11	.....do.....	DOT	Develop a review procedure to evaluate hazardous materials advice promulgated by DOT.	-----	-----	.....do.....	.....do.....	Do.
I-77-1	Apr. 25, 1977	FHWA	Develop guidelines for local and State officials for routes of hazardous materials in urban areas.	-----	-----	April 1978—Open—Acceptable action.	No.....	Quarterly meeting Mar. 29, 1978.

	Nov. 1, 1977	DOT	Guidelines for coordination of emergency activities at scene of radioactivity accident.	Feb. 1, 1978	None—Overdue	Open—Unacceptable action,	No.	Mar. 22, 1978, with DOE—ERDA people,
I-77-2	Nov. 1, 1977	DOT	Guidelines for coordination of emergency activities at scene of radioactivity accident.	do	do	do	No.	Do.
I-77-3	do	DOT	Procedures to minimize time to identify radioactivity hazard at accident.	do	do	do	No.	Do.
I-78-1	Jan. 17, 1978	DOT	List regulated hazardous materials that correspond with United States, UN, IMCO, IATA descriptions and numbers.	Apr. 17, 1978	No response—Overdue			
I-78-2	Mar. 9, 1978	Fire Marshalls Association of North America,	Develop guidelines to identify "recognized hazards" of NFPA Code 30, secs. 1050 and 1060.	June 9, 1978				
I-78-3	do	do	Develop procedure for reviewing "recognized hazards" at all gasoline stations with code 30 variance.	do				
I-78-4	do	do	Develop program to inform local firefighters of unusual risks at code 30 variance stations.	do				
I-78-5	do	AAMVA	Study periodic motor vehicle inspection of vehicles carrying hazardous materials.	do				
I-78-6	do	Underwriters Laboratory,	Determine ways to reduce misuse of listed industrial products after manufacture, special emphasis on hazardous materials transportation.	do				
I-78-7	do	do	Review and amend UL standard for safety 142, aboveground storage tanks, to protect against violent rupture/fire.	do				

NTSB SAFETY RECOMMENDATIONS, STATUS BY CALENDAR YEAR (INTERMODAL)

Calendar year:	Open			Closed			Recons. of NLA
	Accept- able action	Accept- able alternate action	Unac- ceptable action	Accept- able action	Accept- able alternate action	Unac- ceptable action	
Total	34	10	7	4	3	9	13
Percent	29	21	12	9	9	9	9
1971	5		1	2			13
1972	2			1			
1973	2	1				1	
1974 ²				1			
1975	4	2				1	
1976	11	4	6			1	
1977	3	3		(4)	(4)	(4)	(4)
1978	3	(4)	(4)	(4)	(4)	(4)	(4)
1979							

¹ NLA.

² None issued.

³ 20 percent.

⁴ No response to date.

Senator DURKIN. Mr. Santman, please.

Mr. Santman, we are proceeding under considerable time restraints because we have another transportation matter pending on the floor. Your entire statement will be printed in the record, but I would appreciate it if you would highlight it because I can read faster than I can listen. Rather than reading your entire statement, if you would paraphrase it, the whole statement will be placed in the record.

STATEMENT OF LEON SANTMAN, ACTING DIRECTOR, MATERIALS TRANSPORTATION BUREAU; ACCOMPANIED BY ALAN ROBERTS, DIRECTOR, OFFICE OF HAZARDOUS MATERIALS OPERATIONS

Mr. SANTMAN. Thank you, sir. You anticipated my request to summarize the statement.

With me this morning is Mr. Alan I. Roberts, who is the Director of our Hazardous Materials Operations Office, hazardous materials side—

Senator DURKIN. One thing. From the testimony, one could gather that the fact the MTB exists is one of the best kept secrets in the Federal Government. I would like you to address that fundamental issue as well.

Mr. SANTMAN. It's certainly not one of the largest organizations in town. Our total size is in the neighborhood of 127 personnel, covering both pipeline safety and hazardous materials.

Before going into my presentation this morning, I would like to let Senator Schmitt know that I am serving as the Department's representative to a Presidentially ordered interagency task force concerned with the disposal of nuclear waste. While it's being headed up by the Department of Energy, we are there for the very definite purpose of reminding those who are concerned with finding a solution for the disposal of nuclear waste that they cannot afford to overlook the questions associated with the movement of such materials from their place of origin to the ultimate destination storage, whatever that destination may be.

We are making very pointed suggestions that the proper principal areas of concern are the concerns of the communities through which the materials must move or move nearby, and second, the needs and concerns of the transportation industry, the carriers who will be called upon to move those materials.

So it's not a matter that I believe will be unaddressed by those in the executive branch who are concerned with finding lasting solutions to nuclear waste disposal.

Senator SCHMITT. Could we use the words "nuclear waste management," because I am not sure we are ever going to dispose of it permanently?

Mr. SANTMAN. I stand corrected, I believe those are the words used in describing the establishment of the interagency effort, the word "management."

Senator SCHMITT. Are they listening to you?

Mr. SANTMAN. We have had our first meeting. The operation is in its infancy.

Senator SCHMITT. You have just had your first meeting?

Mr. SANTMAN. We had the first meeting of this particular group about 2 weeks ago; another meeting is scheduled for later this week. There has been some background staff work going on.

Senator SCHMITT. Mr. Chairman—

Mr. SANTMAN. It's a bit early in the game to give an indication of how closely they may be listening to the transportation voice.

Senator SCHMITT. Well, it's amazing how long it takes for the Government to realize that they have a problem of coordination. I can't believe you just met for the first time 2 weeks ago. Is that right?

Mr. SANTMAN. That's correct.

Senator SCHMITT. OK. Amazing.

Mr. SANTMAN. That is not to say that there was not advance work done in terms of some additional background studies.

Senator SCHMITT. Well, I understand. It's just that the nuclear waste management issue is not a new one. It's been around for 15 years. Obviously, the Carter administration's only been around for 15 months, but it is a cornerstone, a long pole in the tent if we are ever going to utilize nuclear power in a broad way in this country.

I hope that now that you have started, that it will be done in an accelerated way.

Mr. SANTMAN. I would not want to leave a misunderstanding. The group that I am speaking of was a group that was directed to come into existence just a short time ago to pick up this question of broad agency input and concern.

Senator SCHMITT. Fine.

Mr. SANTMAN. It's clearly an effort to involve all of the interested agencies in town regardless of how limited their particular concern or interest may be.

Senator SCHMITT. Don't let the new kid on the block, the big boy, DOE, intimidate you, because you have got some friends over here.

Mr. SANTMAN. Thank you for the advice.

Senator DURKIN. Mr. Santman, S. 1896 requests an open-ended authorization for fiscal 1979. Your authorization level being discussed in the House committee is \$3.7 million. Assuming this committee wants to set specific authorization levels, does the Department have a

position as to what that level should be, and, second, what possible areas of activity might the MTB become involved in which would justify setting an authorization limit higher than the \$3.27 million?

Mr. SANTMAN. Well, the figure of \$3,727,000 is the figure in the President's budget for the next fiscal year for the hazardous materials side of our operation. That figure was worked through a zero-based budget process, and we believe that that level will be sufficient to cover the activities that are planned within the President's budget.

But we also believe that the authorization figure should provide a sufficient space above that to deal with contingencies, to deal with additional matters that might require additional appropriations during the forthcoming fiscal years.

Senator DURKIN. So you're not really asking for an open-ended authorization?

Mr. SANTMAN. Well, the request that came from the administration was for open-ended authorization for the next 2 fiscal years. But if the committee determines that it's more willing to go with a fixed number, what I am suggesting is that the fixed number should be sufficiently above the \$3.7 million to allow for any contingencies that might require us to seek appropriations over and above the \$3.7 for this forthcoming fiscal year, and to allow for expansion beyond that \$3.7 if it's appropriate in the ensuing fiscal year. We are talking I believe about two fiscal years, 1979-80.

We don't know at this point what the President's budget request will be for 1980. It's fair to assume that it will be at least \$3.7 million, possibly a bit more.

Senator DURKIN. You're the Acting Director. What is your opinion, what is your recommendation for an authorization figure? I mean sufficiently high to take into consideration all contingencies doesn't give us much guidance.

Mr. SANTMAN. I believe a figure of \$5 as is presently in there would give the kind of margin that would be necessary over and above the \$3.7.

Senator DURKIN. You feel it should be \$5 million authorization?

Mr. SANTMAN. I believe that would accommodate the needs and the contingencies.

Senator SCHMITT. Mr. Chairman, in view of the questions that have been raised by preceding testimony, I think it would be wise for the committee to think twice before we go too far until we know that the—

Senator DURKIN. We are not deciding on it right now.

Senator SCHMITT. I understand.

Senator DURKIN. I am just trying to get some question in before the bell goes off and we all leave.

Senator SCHMITT. I realize we are not deciding. This is just a comment.

Mr. SANTMAN. May I proceed with summarizing?

Senator DURKIN. I have a couple other questions because we have, as I say, some time constraints. I think Jack would agree that the testimony of Mr. King raised some very substantial questions. I, for one, would like responses in writing submitted to the committee on a detailed, point by point, addressing the allegations, if you will, in Mr. King's statement. And submit it in writing for the committee.

What possible areas of activity might you become involved in that would justify the \$5 million, over and above the \$3.7 million? Do you have any specific plans or programs or is that just for contingencies?

Mr. SANTMAN. It's for contingencies, sir.

[The following information was subsequently received for the record:]

The following is our response to the NTSB statement. In each of the five areas, the NTSB comment precedes the response.

1. "The Materials Transportation Bureau (MTB) has failed to publish safety guidelines to identify accident risks before a catastrophe occurs."

One of the objectives of the Department of Transportation's hazardous materials classification system is to signify accident risks before accidents occur. The classification system is the means of identifying hazard characteristics of materials by their nature and degree and is the key to the overall regulatory system for hazardous materials, including packaging, marking, labeling, documentation, and vehicle placarding. Using definitions based on sets of quantitative criteria, the shipper can determine the proper classification of a specific material. The Hazardous Materials Regulations currently provide for 17 hazard classifications—

- Explosives A, B, and C
- Flammable liquids
- Flammable Solids
- Oxidizers
- Organic Peroxides
- Corrosive Materials
- Compressed Gases
- Poisons A and B
- Irritating Materials
- Etiologic Agents
- Other Regulated Materials (ORM) A, B, C, and D

The packaging and handling requirements which have been established for each of these classes are based on the safety risks presented by the materials in the class. The communications regulations (package marking and labeling, shipping documentation, and vehicle placarding) are designed to provide an alert to the risk.

The Safety Board has suggested the use of fault-tree analysis or other analytical methods such as risk analysis. The Office of Hazardous Materials Operations over a 5-year period expended over \$90,000 to determine the feasibility of utilizing risk analysis concepts the National Transportation Safety Board recommended (NTSB-ST8-71-1, January 1971) for improving the Hazardous Materials Regulations. However, the risk models developed for us by the University of California are dependent upon the availability of extensive performance data on the transportation of any particular hazardous material under consideration and transportation accident experience for the mode or modes of transportation being considered. For both fault-tree and risk analysis, a reliable data base developed over an extended period of time is a critical factor in assessing risk. Such a firm and exhaustive data base for the whole range of hazardous materials does not exist. Accordingly, formalized and mathematical risk model treatment would not provide meaningful results and could, in fact, lead to a false sense of knowledge about possible risks (see Office of Technology Assessment report on Transportation of Liquefied Natural Gas, September 1977, pages 59-60).

However, risk analysis can be a useful tool, even if not the answer to all day-to-day regulatory decisionmaking. Early development and application of risk analysis techniques in safety decisionmaking were aimed at fixed facility problems. Use of the methodology for evaluating risks in transportation is certainly more complex due to the unique problems of transportation and the variability of transportation routing. For specific point-to-point, fixed routing, fixed commodity, fixed packaging transport systems, risk analysis methodology can produce meaningful information. The MTB in February 1978 initiated action to obtain contractual services for a risk assessment of air versus the other transport modes (highway, rail, and marine) for transporting explosives and flammable cryogenic liquids. The MTB will use the comparative risk assessment results in evaluating existing regulations and exemption applications concerning those particular substances.

2. "The Materials Transportation Bureau (MTB) has refused to establish a central data system to provide information and advice to firefighters and local safety personnel."

Prior to the enactment of the Hazardous Materials Transportation Act which in § 109(d) contains the provision calling for the Secretary of Transportation to establish a central reporting system and data center, the Departments of Transportation and Health, Education and Welfare recognized the need to provide immediate assistance to emergency response personnel in the event of transportation emergencies involving chemicals. In 1970, officials of these two Departments approached the Manufacturing Chemists Association (MCA) to suggest that personnel from the chemical industry who possessed the necessary technical expertise establish a system to provide such assistance and information. On the basis of a resulting study undertaken by industry safety, packaging, and transportation specialists, it was determined that a single center, nationwide in coverage, and accessible through a single telephone number would be the most effective arrangement. Following review and confirmation by the industrial specialists of the MCA's technical committees, the Chemical Transportation Emergency Center (CHEMTREC) was established. The Department of Transportation assisted in the dissemination of information concerning this newly established central information point. The Department continues to recognize the capabilities of CHEMTREC and through our various publications, including the Emergency Action Guide for Selected Hazardous Materials, advises the transportation and emergency response communities of the nature and availability of CHEMTREC's services.

Notwithstanding that CHEMTREC is supported by private funds and by the cooperation of hundreds of industry participants who provide technical information, rather than by Federal funds, the Department of Transportation believes this system meets the public need addressed by § 109(d) of the Hazardous Materials Transportation Act. CHEMTREC provides immediate advice for those at the scene of emergencies, using prepared and immediately available information on over 18,000 chemicals, and then notifies the shipper of the emergency for further action.

The MTB participates in periodic evaluations of the advice offered by CHEMTREC and is seeking ways to offer additional support to the information system.

3. "The Materials Transportation Bureau has refused to register bulk carriers of hazardous materials."

The National Transportation Safety Board recommendation in this area relates specifically to carriers of liquefied petroleum gas (LPG). Under present regulations in 49 CFR 177.824, the Federal Highway Administration requires carriers to register flammable gas cargo tanks. The required reports identify the carriers who own or operate the MC 330 and 331 cargo tanks which are the only type of tanks authorized for LPG highway carriage. These reports then identify all carriers involved in transporting bulk LPG in cargo tanks in interstate commerce. The Federal Highway Administration maintains and verifies these records through their road checks of motor vehicles.

The Materials Transportation Bureau believes that imposing an additional reporting requirement on these same motor vehicle carriers would not provide an additional safety benefit commensurate with the efforts required and would only duplicate already available information.

4. "The MTB has permitted its exemption procedures to become a free-for-all for the hazardous materials industry."

The exemptions procedures, which appear in Subpart B of 49 CFR Part 107, prescribe the information to be submitted on each application for exemption. The information includes an assessment of any increased risk likely to exist under the proposed conditions and specification of safety control measures which will compensate for the increased risk. An exemption is issued only when analysis of the technical information presented with the application indicates that the level of safety under the terms of the proposal will be equivalent to that prescribed in existing regulations or consistent with public interest and the policy of the Hazardous Materials Transportation Act. The primary factors in determining an equivalent level of safety are properties and characteristics of the hazardous materials, packaging design, and volumetric capacity, packaging product retention capability under conditions incident to transportation, and carrier handling and operational constraints.

Implementation of the Safety Board's recommendation would require the applicant to assess the entire range of risks rather than the incremental level above those addressed by existing regulations. The existing standards were developed after thorough safety assessments of the risks. Many are detailed and design oriented. Technological advances in packaging and container systems are generally not covered by these older design standards. Therefore, the current state-of-the-art which certainly consists of significant improvements to hazardous materials containers and packagings, and in many cases reduced costs, can be recognized only through exemptions from the regulations. So what the Safety Board characterizes as "almost automatic exemptions" and an "economic free-for-all" is really an acknowledgement of industrial innovations which have surpassed the state-of-the-art on which the regulations were based. Our publication in the Federal Register of each application may contribute to increased numbers of applicants for similar exemptions, but in any case, every application is the subject of a public proceeding and is evaluated on its own merits.

5. "The Materials Transportation Bureau has declined to become a leader in developing new emergency response techniques."

The following brief summary of the Materials Transportation Bureau's (MTB) activities related to hazardous materials emergency response is evidence to the contrary of this statement.

SYSTEM FOR COMMUNICATING HAZARDS

The effectiveness of the response to a transportation accident involving the release of a hazardous material depends upon the ability of responding personnel to address the problem. To a large degree, that ability depends upon their knowing what they are dealing with.

One of the first administrative actions taken after enactment of the new law was the April 1975 announcement of a new and intermodal system for classifying hazardous materials in transportation and communicating the risks they present. The new rules provided, first, for consistently identifying the hazard characteristics and describing the materials and, second, communicating the hazards of these materials through uniform vehicle placarding, package marking and labeling, and shipping documents. This was a major regulatory activity involving concerns and interests ranging from sophisticated, multi-national chemical companies to innumerable small business concerns.

The new regulations had to be implemented on a phased basis. The final date for installation of placards is set for July 1 of this year. This new system is now essentially in place, and is thus providing for the first time, the basic foundation for further efforts to improve emergency response capability.

EDUCATION AND TRAINING

Commencing on the heels of the 1975 announcement of the new system, the Department of Transportation, through the Materials Transportation Bureau, the operating administrations, and the Transportation Safety Institute in Oklahoma City, undertook a concerted program to educate the industry, particularly shippers, and emergency response personnel about the regulatory changes and the new system for identification of hazardous materials and communication of hazards.

A vast amount of training materials on the provisions of the hazardous materials regulations, to assist the industry and emergency response personnel have been distributed. In 1977, the Bureau dispensed nearly $\frac{3}{4}$ million pieces of informational materials in response to over 5,000 requests. An item of particular significance among the training literature we develop and distribute is the Emergency Action Guide for Selected Hazardous Materials. The manual outlines the hazards of certain materials and contains technical information which will help emergency personnel during the first 30 minutes following a spill involving volatile, toxic, gaseous, and/or flammable material shipped in bulk. This manual has been revised, added to, updated, and reprinted a number of times since its development in 1973, and over a half million copies have been distributed.

CHEMICAL TRANSPORTATION EMERGENCY CENTER

In addition to the specific guidance, contained in the manual, the user is directed to a 24-hour, seven days a week, toll free telephone number where further assistance and advice can be obtained. That service—the CHEMTREC system—

is operated by the Manufacturing Chemists Association. Our relationship with CHEMTREC is discussed in detail in our response to the Safety Board's second point.

NEW EMERGENCY RESPONSE TRAINING COURSE

Another important activity in the area of emergency response relates to local planning and preparation. Accurate assessment of emergencies, effective decision-making, and appropriate action at accidents requires advance awareness and planning by law enforcement and firefighting personnel. To assist in this area, the Materials Transportation Bureau, in July 1976, contracted with the National Fire Protection Association for the development of a comprehensive training course for emergency response personnel. The 20-hour course designed to be taught by Fire and Police department training officers stresses the importance of defining the roles and responsibilities of the various concerned response groups. It places particular emphasis on communications and command considerations but also presents a general overview of hazardous materials transportation. Perhaps its most important feature is its guidelines for use by local fire departments and police departments in their development and implementation of their own community emergency response plans.

As in the case with our Emergency Action Guide and the operation of the CHEMTREC system, there will be monitoring of the course's use and effectiveness, periodic reviews of its content against the monitoring results, and adjustments and additions made where called for. We have already initiated arrangements to supplement the course with one or two additional sessions on dealing with pipeline accidents. And, although the course now addresses radioactive materials, we are considering a possible special session on that subject.

Mr. SANTMAN. As an example, although it's on the other side of our operation, on the pipeline side, a couple years ago we found ourselves confronted with a very difficult situation with the welds on the Alaska pipeline and had to come up with a considerable amount of money beyond what we had contemplated spending for that fiscal year to get into the question and examine the problem. Things like that can happen on the hazardous materials side of the operation, also.

Senator DURKIN. Right. But I mean you were talking about \$3.7 million, you're almost doubling that and the excess is for contingencies. I mean what about long-range planning? To come in and ask for another \$2.3 million is just—just for contingencies doesn't seem to be a very well-grounded request. We could pick eight, count the pictures on the wall, come up with that number. Just what are you going to do with it, what plans do you have to do with it?

Mr. SANTMAN. The figure, I believe, would be something less than \$1.3, the difference between \$3.7—

Senator DURKIN. That is why I went to law school, you see. I am not too good in math.

Mr. SANTMAN. I did also, but I have an engineer beside me who prompted me and told me the number—

Senator DURKIN. Fine. I stand corrected. But what are you going to do with the dough, what are you going to do with the authorizations? To come in and tell the committee it's just for contingencies—

Mr. SANTMAN. We may do nothing with the authorization, sir. I am suggesting that if there is a need that arises between the 1st of October of this year and 1st of October of next year, that puts a need, requires us to come back to the Congress and ask for more appropriations, we will also have to come back to this committee again and ask for an authorization for those appropriations.

Senator DURKIN. Can you give me some of the indications, what are the areas in which these needs might arise, is it placarding or signs or exemptions?

Mr. SANTMAN. We are not talking about planned activities, sir.

Senator DURKIN. You are the Director of that organization. You come in and ask for another \$1.3 million for contingencies. Do you have any idea what—

Mr. SANTMAN. I am not asking for an additional \$1.3 million, sir. I am asking on behalf of the Department, through the appropriations process, for \$3.727 million. It is necessary in order for us to receive that amount from the Appropriations Committee to have it preceded by this committee, having worked through an authorization that is at least that amount.

Now, I believe that if they authorize only \$3.7 million, that it probably would—it would take care of what we are asking for. I am only mentioning \$5 in response to your question, sir, of how much of a margin, what would be an appropriate margin.

Senator DURKIN. I think it's a realistic question. I don't think the committee should have to guess how many beans are in a jar and come up with the figure. The other members of this committee are going to ask us, you know, what is the justification offered by the Department with respect to this legislation. I do think it's a little strange that you can't even tell us the areas in which the contingencies might arise.

Mr. SANTMAN. Sir, by very definition, when I said contingencies, I'm talking of unanticipated things that are not planned, occurrences that may arise that require us to increase an effort in a particular area—

Senator DURKIN. Well, what type of contingencies? Except possibly in the State of Maine, we can rule out an Indian attack. I mean, what types of contingencies are you planning for? I mean what areas?

Mr. SANTMAN. There could be additional accidents, accidents that occur in a large number that would require us to mount a particular effort to examine just what had occurred, to try to find quick solutions, and not, under a set of circumstances that would not permit us to wait until the next fiscal year.

Senator DURKIN. Would the additional authorization enable you to follow some of the Safety Board recommendations? I mean, is that what—

Mr. SANTMAN. No; that is not what I am getting at. We have on board right now an investigation going that I think may serve as an example of a contingency that would put additional demands on us. We are looking into a rupture and explosion of a high pressure tube trailer operation. It involved 40-foot long tubes operated at approximately 2,000 pounds' pressure. We are finding that stress crack corrosion has been involved. We suspect that this is a principal cause of the problem. It's requiring us to expend more moneys in terms of metallurgical research and testing than we had contemplated within our present fiscal year 1978 budget. We are having to spend more money on that than we had budgeted for. I am suggesting that that kind of situation can arise and that can be the sort of contingency that would require us to—

Senator DURKIN. But I would think if you're the Acting Director, you would at least have an idea, a better idea of the contingencies that might arise. You struggled and bobbed and weaved and finally came up with "there may be a problem with high pressure line." It doesn't seem that there is much planning going on down there. You're asking

us to increase the authorization for contingencies. Based on the statement of Mr. King this morning, and based on your performance so far, I think you're an outstanding candidate for GAO audit as to just what the hell goes on down there and I'm going to recommend to the chairman of the committee that the GAO auditors come down there and find out what is going on.

The last time the Office of Hazardous Materials operation was before this committee for authorization, we learned that you had requested 144 employees for the office, but that the President's budget allowed for 67 employees. I understand that MTB's most recent request is for 108 employees but the President's budget provides for 80.

What specific programs or activities have been cut or reduced as a result of the President's budget request?

Mr. SANTMAN. I believe the numbers, as they went from the Department to the OMB and were approved by the President for inclusion in his budget, includes an additional seven persons which we contemplate dedicating to, primarily, improvement in the quality of rules and regulations dealing with the problems associated with transportation of hazardous materials.

That is an increase over what was there last year in the budget. That was the circumstance that I found when I assumed responsibility for this operation in November of last year.

I think that it represents a recognition both by Secretary Adams and by the administration that there is a need for some additional activity, some additional effort in this area. And I believe that the seven positions that are included in the budget will be of considerable assistance to us in addressing rulemaking problems. Many of those that are described in the document that you have—

Senator DURKIN. Right. But somewhere along the line, someone asked. Your most recent request was 108 employees.

Now what were they going to do, process exemptions? In light of the fact that you are not going to get those 108 employees, what contemplated activities are going to have to be curtailed because you're not going to receive the 108?

What were they going to do, for openers; and No. 2, what can't you do because you're not going to get them?

Mr. SANTMAN. First of all, sir, I never made the request for 108. Requests that are now before the Congress are ones that evolved out of the preceding Director's consideration of needs and were processed by Secretary Adams' office.

If there were more personnel than we now have, or contemplate getting in this year's budget, I would direct them first to the primary task of the Materials Transportation Bureau, the development and improvement of the basic rules.

Second, I would look to increase enforcement, inspection, and compliance activities in the area for which the Materials Transportation Bureau has been assigned by the Secretary responsibility for compliance and enforcement.

Those are the two areas to which additional resources that would be available to me would be best utilized, in my judgment.

I believe, sir, that the organizational structure of the hazardous materials business in the Department that is discussed in my prepared testimony may have some bearing on your understanding of the answer that I just gave you.

In the compliance and enforcement—

Senator DURKIN. I still don't understand. I mean someone asked for 108. What were those 108 going to do? What can't be done because you're not going to get those 108? And what are the 80 that you are still seeking, what are they going to do?

Mr. SANTMAN. I can speak to how we will use the 80.

Senator DURKIN. Wait a minute now. Maybe I'm in the wrong room, but you're head of that operation.

Mr. SANTMAN. I have been since last November, sir.

Senator DURKIN. How many employees in the whole operation?

Mr. SANTMAN. In the entire operation, pipeline and hazardous materials, our present number is 127 authorized. We have a number of vacancies, but 127 is our total number. Pipeline and hazardous materials—

Senator DURKIN. How many in hazardous materials alone would you say?

Mr. SANTMAN. I believe the number is 70; 66, sir.

Senator DURKIN. How many vacancies down there in hazardous materials?

Mr. SANTMAN. Fifteen at the present time.

Senator DURKIN. What's the problem? When are you going to fill them?

Mr. SANTMAN. As quickly as I can prod our personnel people into moving the papers to get them on board.

I can give you a breakdown of where we stand—

Senator DURKIN. Your personnel or the DOT personnel? Your personnel people under your control?

Mr. SANTMAN. No, they are not, not at the present time. We are still relying upon the personnel and procurement services of the immediate offices of the Secretary. We contemplate this changing—

Senator DURKIN. Are you saying the Secretary's office has been remiss in not adequately meeting your personnel needs?

Is that the bottom line?

Mr. SANTMAN. What I'm saying is that the Secretary made some organizational changes about last September or October, and took the Materials Transportation Bureau, together with a number of other aspects of the Department that deal with intermodal questions, and put them together in a special programs and research directorate, with the intention of having that group, the directorate, have its own personnel and procurement services.

They are in the process now of establishing procurement and personnel services that will be more directly associated, a part, much closer a part of our operation and I would expect that we would get better services when that is completed.

Senator DURKIN. Why should we give you any more personnel when you haven't been able to fill the vacancies you have now?

Mr. SANTMAN. Because we will do the best we can to get the kind of people that we need to address the rulemaking, compliance, and enforcement problems.

Senator DURKIN. I have to go vote. Please continue.

Mr. KEEFE. Mr. Santman, would you like to continue with your opening statement?

Mr. SANTMAN. I really never got started with it.

Mr. KEEFE. Would you like to start your opening statement?

Mr. SANTMAN. The hazardous materials program is conducted by five of the operating elements of the Department of Transportation. To insure a uniform approach to the regulations, the Secretary has delegated major rulemaking responsibility to the Materials Transportation Bureau. This was done when it was first established in 1975, with one exception. That is, the formulation of regulations concerning the bulk movement of hazardous materials in marine mode which is handled by the Coast Guard.

The responsibility for establishment of regulations is in the Bureau. Internal procedures specify that the hazardous material rulemaking matters peculiar to a single mode of transportation are to be dealt with internally by the operating administration concerned which has the duty to develop the substantive solution to the problem being addressed.

The Bureau's Office of Hazardous Materials Operation headed by Mr. Roberts performs a function with particular emphasis on the nature of the hazardous materials concerned. The Hazardous Materials Transportation Act, enacted into law in early 1975, extended the Department's regulatory authority to cover manufacturers of packages and containers used in the transportation of hazardous materials.

The Bureau exercises compliance and enforcement authority primarily over those entities, as well as over shippers of hazardous materials that are moved by a combination of two or more modes of transportation.

The Department's four major modal administrations, the Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration, and the Coast Guard, have responsibility for enforcing regulations pertaining to their respective modes of transportation.

They plan and carry out their own enforcement programs in this regard.

There were several considerations that lead to having the Operating Administration retain this responsibility. First was that adequate inspection requires that hazardous materials inspectors have a working knowledge of the mode by which the shipment is carried.

Second, the Operating Administrations already had existing Federal forces with considerable experience in inspecting hazardous material movements.

However, there is not a rigid line drawn around the enforcement administrations and the Bureau, respectively. Rather, there is sufficient flexibility to allow, for example, a Bureau technical expert on hazardous materials and containers to participate in an enforcement case together with the operating administrations involving a carrier.

Similarly, should an inspector, say, from the Federal Railroad Administration detect a violation by a container manufacturer concerning a shipment by rail, he is authorized to pursue that investigation back to its source and conclusion.

The increasing diversity of hazardous materials and technology and the requirements for shipping materials over greater distances and the increased emphasis on international movement of hazardous materials contributed to the expansion of the overall transportation industry and to more intermodal transfers of hazardous materials.

This resulting increase in complexity requires careful coordination of both the regulatory and the compliance enforcement activities within the Department to insure as much uniformity as possible and to preclude duplicative efforts.

The Secretary, in his recent reorganization of his immediate staff offices, as I have mentioned before, consolidated certain technical research functions and placed them together with the Materials Transportation Bureau in a new research and special programs directorate.

Under this parent organization, a number of relationships are developing or expanding, including the relationship between the Bureau and the Transportation Systems Center in Cambridge in areas of data and information systems and laboratory testing.

We believe that we will have a greatly enhanced capability at collecting and utilizing data and information through this relationship.

We also have in the directorate with us the Transportation Safety Institute in Oklahoma City which has for some time now been involved in giving hazardous materials and pipeline safety training program and educational activities.

A reorganization within the Bureau itself is now pending before the Secretary. This will enable us to, when approved, restructure four offices, separate offices of pipeline safety regulations, hazardous materials regulations, an office of operations and enforcement, and an office of programs support.

This realignment of functions by consolidating some of the common operational support activities which generally involve similar procedures will enable more effective utilization, I believe, of the resources across the two safety programs.

Moreover, I suspect that the separation of responsibility in management of establishing the rules from the responsibility for implementing and enforcing them to improve both the management and the carrying out of the hazardous materials program.

Less than 2 years ago, the hazardous materials regulation governing transportation by the four principal modes—air, rail, highway, and water—previously could be contained in three different volumes in the Code of Federal Regulations.

They have been consolidated and reduced by approximately 700 pages.

In addition to being consolidated, similar portions from each of those previous bodies of regulations were standardized and organized together for ease of understanding.

As an example, regulations dealing with shipping papers, marking, labeling, and placarding were made uniform and consolidated into a single body of hazardous materials communication relations.

The point that I'm trying to make is that prior to that time, each mode of transportation had its own approach to placarding, to labeling, what should be on shipping papers. This is primarily because they came from different agencies when they were combined in the Department of Transportation.

The completely revised communications system prescribes uniform labels and placards which we believe facilitates better intermodal transfers, and which are, we believe, readily identifiable both to the routine handlers and to the emergency response personnel who need to be alerted to any actual or potential risk.

This consolidation has, we believe, encouraged compliance with the regulations, as well as having aided the Department's ability to observe and enforce the standards.

Mr. KEEFE. Excuse me, Mr. Santman.

Do you have any indication of what the level of compliance with your placarding program currently exists?

Mr. SANTMAN. I'm not sure how your question was aimed?

Mr. KEEFE. What percentage of the carriers subject to DOT regulation are complying with your placarding requirements?

Mr. SANTMAN. Would it be fair to state the question, what percentage or what percentage of shipments that are required to be placarded are properly placarded?

Is that—

Mr. KEEFE. That is what I'm getting at.

Mr. SANTMAN. Mr. Roberts?

Mr. ROBERTS. I guess the best way to answer that is to tell you that one of the most actively enforced regulations is the—are the regulations pertaining to the placarding of transportation vehicles.

I think you will find that the Bureau of Motor Carrier Safety places greater emphasis on that.

So to say that there is any statistic involved would be to discuss the level of enforcement. And I would say that my impression is, not having the statistic available, is that the compliance for placarding requirements is rather high.

Mr. KEEFE. Are you saying that the level of compliance is directly related to the level of enforcement?

Mr. ROBERTS. Quite a bit.

Mr. KEEFE. And your indications are that there is a high level of compliance in the placarding requirements under the Bureau of Motor Carriers?

Mr. ROBERTS. The Bureau of Motor Carrier Safety in almost every case of failure to placard a vehicle has entered into some form of an enforcement action.

I think that there might be some warnings involved, if there was possibly a showing of misunderstanding or confusion.

But on a repeated violation, I think you will find that there has been very active enforcement in this area over the years, and this goes back 20 years because it's nothing new.

When I was an inspector in the field years ago, it was one of the number one things that we have actively enforced. And it was one of the easiest ones to get into Federal court.

Mr. KEEFE. What's the average fine for a failure to comply with the placarding requirement?

Mr. ROBERTS. I don't know.

Mr. KEEFE. Continue, please.

Mr. SANTMAN. Many of the statistics that we have provided in response to your written questions and as attachments to this statement and in our annual report, we compile for the Department. The particular area in which the Bureau's enforcement activities are directed are primarily container manufacturers and some of these intermodal shippers.

I will touch briefly on that later on. I think that is an area where we are better prepared to talk to you about size of penalties and where we are directing enforcement activities.

We can, of course, get for you answers to particular questions you have about how enforcement is carried out in the Highway Administration or the Rail Administration if you have some particular areas you wish to pursue.

The consolidation that I was speaking of also did a number of other things. The same rulemaking removed certain regulatory requirements from small package goods, including common household items such as cleaning solvents and aerosol package deodorants which present a little or limited hazard in transportation.

The new material classification, Other Regulated Materials, exempt limited quantities of these consumer goods from labeling and packaging requirements.

In another area in the development of international hazardous materials transport standards, the United States position has been to promote a worldwide system that provides necessary consistency between modal and regional requirements to insure that insofar as practical, the hazardous material shipments may move freely between the various modes in the regions of the world and, at the same time, be in compliance with the applicable regulations.

This is a particularly important matter to the economic interests of the States which export about \$5 billion worth of chemicals each year, considerably more than it imports.

Personnel in DOT participated and continue to participate actively in the United Nations Economic and Social Council's committees of experts on the transport of dangerous goods, the Intergovernmental Marine Maritime Consultative Organization, the International Civil Aviation Organization, and the International Atomic Energy Agency.

Whereas, simplification and clarification and uniformity have been important regulatory concerns, the primary factor, of course, in establishing rulemaking priorities and plans is the requirement for safety to life and property.

The Materials Transportation Bureau's centralized reporting system is the Department's primary source of hazardous material incident data, and "incident" being defined as an unintentional release of hazardous materials.

During 1977, carriers reported nearly 16,000 such releases of hazardous materials. This could be anything from a spilled paint can to one of the kinds of accidents that Chairman King was describing.

Over 14,000 of these 16,000 releases occurred in the highway mode of transportation. A sampling of the incident reports submitted during the preceding year, 1976, and I believe the breakdown will be probably equally valid for the 1977 figures, a sampling of the 1976 figures from the highway mode, cargo tanks and trailers, indicated that about 84 percent of the highway incidents resulted from human error, and the other 16 percent from equipment failure.

Since the most effective incident preventive measure is sound, well-stated and well-understood safety regulations, the Bureau plans with the additional resources requested for fiscal year 1979 to increase its emphasis on reviewing existing regulations and acting upon the many pending proposals for rulemaking.

Responding to both the President's recent Executive order on improving Government regulations, and the Secretary of Transportation's memorandum of March 8 on the same subject, the Bureau has

developed a regulatory review and development plan. A copy of the resulting schedule of amended rulemakings for the coming year is attached to my formal statement and you have also received a copy of the rationale behind that schedule. Future publications of the schedule we expect to project beyond 1 year and eventually, we hope to address projects over an ensuing 5 or more year period with a level of priority assigned to each project.

Although we believe this schedule to be a realistic statement of planned Bureau rulemaking activities and resource commitments for the coming year, as with any schedule of this type, allowances must be made for regulatory projects not contemplated at the time of the initial preparation.

We have to remain flexible enough to accommodate serious emergencies.

Enforcement activities of the Department are known, of course, to promote safety through the deterrence of noncompliance with the regulations. The application of legal sanctions in the area of hazardous material transportation has significantly increased recently, particularly by the FRA.

And in its—and in the Bureau itself.

In January of 1977, the Bureau issued the hazardous materials regulations, moving them under the authority of the new Hazardous Material Transportation Act of 1975, thereby providing civil penalty authority and increased criminal sanction for violations of those regulations.

In the past, violations by the highway and rail mode have only been able to be treated by criminal penalty sanctions. Only the Federal Aviation Administration and Coast Guard had authority to assess civil penalties.

The Bureau itself, in September of last year, inaugurated really for the first time a true enforcement program where it had its own authority to carry out civil penalty kinds of actions.

To date, 13 penalty cases have been concluded totaling about a little under \$18,000.

I believe these numbers may have come up a bit since this testimony was prepared last week and collected this amount.

At least one compliance order has been issued and there are five additional actions pending. The cases that have been developed report that none of them have had to be sidetracked because of lack of evidence.

We are quite pleased with the startup operations that we have with our compliance and enforcement people, and our lawyers are quite satisfied with the quality of work that they are getting from our people that are doing the field inspection work.

Mr. KEEFE. How many people does MTB have in inspection for the intermodal transportation of hazardous materials?

Mr. SANTMAN. Well, I can answer that easily by telling you we have eight positions dedicated to field inspection work.

Whether you are talking about intermodal carriers, when you mention intermodal carriers, you kind of get me off an area that I am not—I don't really understand what you are getting at.

Mr. KEEFE. With respect to the table No. 5—inspectors on your table No. 5—what does that relate to?

TABLE 5.—HAZARDOUS MATERIALS INSPECTORS

Operating administration	Full-time inspectors	Part-time		Total person-years
		Inspectors	Percent of time	
USCG.....	0	694	20.0	138.8
FAA.....	22	109	38.5	64.0
FHWA.....	9	128	20.0	34.6
FRA.....	18	82	15.0	30.3
MTB.....	0	4	25.0	1.0
Total.....	49	1,017		268.7

Mr. SANTMAN. That represents the five inspectors that were on board at the end of that calendar year performing inspection work.

The kind of inspections that they have aimed at, I guess you might describe as trying to hit the gaps between what the operating administrations normally cover through their established enforcement activities. That is, we would not be going to the same places that the Bureau of Motor Carrier Safety would, in truck stops along the road. Nor would we be going on a regular basis into railroad yards to look at tank cars, nor would we be boarding vessels or going on aircraft.

We would be concentrating—we have been concentrating our efforts on, particularly on this new body of people that are subject to, directly subject to regulations for the first time; that is, container and packaging manufacturers drum reconditioners. And we have gotten into a couple of cases that involve intermodal movement.

In particular, I have reference to a case we have concluded that involved a lessor of portable tanks, an organization that owns portable tanks and would lease them to shippers for moving products that could go on a truck body, on the deck of a ship, or on a flatcar.

Our concern with that particular case, and as I recall, I think we got the lead that there was a problem, I think we got the lead from a highway carrier.

We did pursue it and found that there had been some water shipments of these tanks. And the problem with them was that the tank lessor had set up his business but failed to set up an inspection program, a reinspection program for the required periodic retesting and reexamination.

The product that was being shipped in these tanks that he was leasing was Acrilan. I think you will get an idea of what kind of product it was from the description in the red book up there.

Mr. KEEFE. Why has the number of hazardous materials compliance inspections dropped between 1976 and 1977?

Mr. SANTMAN. I believe that most of that reduction—in the table, I believe you're referring to—most of that reduction is in the maritime mode.

I believe that—

Mr. KEEFE. Would you turn to your table 6, Mr. Santman?

Mr. SANTMAN. Yes; I believe that there was an overall reduction of about 33 percent; 31 percent of that was attributable to Coast Guard reduction—

Mr. KEEFE. In your second—

Mr. SANTMAN [continuing]. Waterfront facilities, I think the number dropped from about 6,770 to about 1,700. I believe that accounts for the largest drop in the actual number of inspections.

Mr. KEEFE. The second column from the right.

Mr. SANTMAN. Excuse me just a moment. I would point out that if you look at the accident and incident figures, the maritime sector seems to have clearly the best safety record, or the least incident accident kind of occasion.

So the reduction by the Coast Guard in that area, in diverting its resources to some other activity, I think probably accounts for the largest chunk of that reduction.

Mr. KEEFE. Let's focus on MTB's reduction, the second to the last column. Doesn't it indicate that in virtually every mode, the number of inspections have decreased between 1976 and 1977?

Mr. SANTMAN. I am not sure we are looking at the same table but I believe I understand. I don't see the exact numbers from what we are talking about, but I believe—

Mr. KEEFE. For inspection of carrier operations, it indicates 34 in 1976, 20 in 1977. For inspection of shipper facilities—114 in 1976, 35 in 1977. For inspection of container manufacturers and reconditioner facilities—80, in 1976, 26 in 1977. Inspection of freight forwarder facilities—21 in 1976, 22 in 1977.

Do these figures indicate an overall decrease in the number of your compliance inspections?

Mr. SANTMAN. From my perspective as now the Acting Director of the Bureau and my previous perspective as the principal attorney for the Materials Transportation Bureau, I was not pleased when I was counsel for the Bureau with the way that compliance and—so-called compliance and enforcement was being carried out by the Bureau.

First of all, it was not until the full implementation of the 1975 act that the Bureau had true enforcement authority. It was necessary for the administrative procedures for the assessment of civil penalties for the issuance of compliance orders, it was necessary for those implementing regulations to get in place before the Materials Transportation Bureau had true enforcement authority.

Now, in previous years, there was a—

Mr. KEEFE. When did they obtain that authority?

Mr. SANTMAN. In early 1975, the Department obtained it. In mid-1975, the Secretary established the Materials Transportation Bureau. And it was in January of 1977 that there was a full shift of the regulations to the new act, accompanied by the issuance of implementing regulations to put the hardware in place for a true compliance and enforcement capability to take place.

It was my personal feeling that the compliance, so-called compliance and enforcement activities of the Bureau in previous years, when they did not have true compliance and enforcement authority, was more of a surveillance activity.

Usually it was conducted in connection with training activities. Groups of Material Transportation Bureau personnel were dedicated immediately after the issuance of the large regulation change that I just described, numbers of people were dedicated to an effort to indoctrinate, educate users, shippers and carriers alike, in the new uniform consolidated regulations.

Those same people, when they were not engaged in training, conducted visits to shipper facilities, to freight forwarders, and to some carrier operations. For the most part, those inspections that are listed

there for year 1976 were inspections that did not have enforcement teeth behind them.

So, I think that the—I personally questioned whether or not they were true enforcement activities. But they were visits, they served a purpose. But they were not the kind of concentrated inspection enforcement activities that you would associate with a civil penalty kind of operation or compliance work kind of operation.

They were much closer—they were more educational and informative and surveillance-like in nature, and did not carry with them the likelihood of civil penalty. At that point in time, had there been something detected that was that serious, it would have been transferred to one of the operating administrations, because the Bureau, until about the middle of 1977, really did not have itself geared up to perform true compliance enforcement activities.

That is why I say it was in September of last year, September, October of last year, that the Bureau inaugurated what was really its first true compliance enforcement activity.

It is modest but I think that it is effective, and frankly, I am very pleased with the way that it is evolving. The cases that have come back to my attention from the field people have been very, very thoroughly run through.

There is not much in the way of throwaway action. They are good solid investigations and inspections that have been performed and they are producing what we think are good results.

Mr. KEEFE. Do you want to continue with your statement?

Mr. SANTMAN. The penalties that have been assessed by the Bureau have ranged from \$2,000 to \$9,000; the \$9,000 one being the case they described briefly for you, involving the intermodal tank lessor.

Representative examples of the kinds of inspections and violations, again covering some ground that I had covered before, involve drum reconditioners failure to properly retest and remark the drums. Corrugated fiber box manufacturers failure to construct the boxes that he was marketing in accordance with the applicable DOT specifications. A shipper's failure to properly describe the material in a shipping paper, to mark the containers concerned properly, and to use the proper container meeting the required DOT specification.

Another example is the shipper's reuse of a compressed gas cylinder that was not allowed to be reused under the regulations. In 1977, there were approximately 235 person-years across the Department available for hazardous material compliance and enforcement program activities. Total of about 20,000 inspections of facilities, and roughly 60,000 inspections of transport vehicles of various kinds.

A breakdown of these inspection activities is included in the table that I believe you have. At the present time, only the Federal Highway Administration is operating cooperative agreements generally of a voluntary nature with State agencies in regard to the enforcement of Federal hazardous materials regulations.

However, as local and State authorities become more interested and concerned with the movement of hazardous materials through their jurisdictions, the relationship between Federal and State regulatory agencies is a matter of increasing concern, and I would predict will involve more of our time and effort.

In enacting section 112 of the Hazardous Materials Transportation Act, the Congress endorsed the principles of Federal preemption

in order to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous material transportation.

As I believe that you are aware, in 1976, New York City adopted an ordinance forbidding transportation of most radioactive materials within its boundaries. Recently, the Bureau issued at the request of a Long Island highway shipper, an administrative opinion concerning the preemptive effect of the city's ordinance under the act.

Although our opinion stated that the New York City code is not inconsistent with the requirements of the Hazardous Materials Transportation Act or the regulations issued under it to date, our opinion does not, of course, preclude the possibility that under some other Federal statute or constitutional concept, the New York City ordinance may be viewed as being preemptive.

The ruling does, however, reference that there may be a need for prescribing routing requirements, particularly for highway carriage of radioactive materials. Therefore, we announced in that decision that within 60 days, the Bureau will be issuing an advanced notice of proposed rulemaking to solicit public comment to aid in the decision as to whether the Federal Government should designate routing requirements for certain hazardous materials by selective modes.

A copy of our decision in this case was included as an attachment to my formal statement. Of course, State and local ordinances are prompted by concerns for the safety of their citizens. It is the Department's responsibility to insure safety to life and property while not impeding the flow of hazardous materials in commerce.

Our safety program consists not only of regulations, inspections and enforcement, but also education and training of those involved in the shipping and handling and carrying of hazardous materials.

The Transportation Safety Institute, a sister element in the research and special programs directorate, with our financial and technical support, develop and conduct training for industry personnel as well as for departmental inspectors whose jobs include hazardous materials inspections of plants.

They also include a number of emergency response training activities available to local emergency response personnel. The Bureau and operating administrations themselves conduct additional training sessions, and routinely participate in private industry sponsored training programs.

Additionally, we maintain approximately 30 fact sheets and pamphlets on the handling of hazardous materials, and in 1977, although we may be obscure and unknown to some persons, distributed over three-quarters of a million items in response to over 5,000 requests.

We are currently working with the Nuclear Regulatory Commission to disseminate newly developed guides for the handling of radioactive materials in transportation. The recent series of derailments and resulting releases of hazardous materials have underscored the fact that adequate hazardous materials containment regulations alone are not enough to prevent accidents and human disruptions.

We in the Department and a concerned transportation industry must devote more attention to providing community and emergency response personnel with the technical information necessary to plan for and respond to emergencies when they do occur. In this regard,

we and the National Transportation Safety Board have no area of disagreement on the need.

The assistance of various types is generally required of and often provided by shippers themselves, nearby by industries, by military organizations, and in the amelioration of spills and ruptures. An increasing number of local jurisdictions are a part of community cooperative efforts, planning emergency response capabilities and attempting to provide for the handling and containment of the spills of hazardous materials.

However, the availability of resources at the local level is a continuing problem, and additionally, there is need for better guidelines to enable local action in developing such plans.

During 1977, the Transportation Safety Institute in Oklahoma City carried out 22 separate emergency workshops attended by about 1,000 emergency service personnel and State training officials.

In a decision the MTB has recently issued, the 1977 edition of the Emergency Action Guide for selected hazardous materials that has been referred to earlier in these proceedings—that manual, as was pointed out, outlines the hazards for the 42 hazardous materials most frequently transported in bulk, and contains technical information which will help emergency personnel during the critical first 30 minutes following a spill.

It is intended to be something that can be carried in the dashboard of a police car or fire truck or pocket of a fireman. It is not an answer to every possible encountered situation. That manual has been revised and reprinted a number of times since its initial development in 1973.

Over a half million copies have been distributed before the early part of this year. The demand for this document in the past month or two has nearly depleted the supply of about 200,000 we started out this calendar year with.

Section 109(D)2 of the Hazardous Material Transportation Act that has been discussed by Chairman King earlier, calls for the establishment and maintenance of a central reporting system and data center to provide law enforcement and fire fighting personnel with advice on meeting hazardous material emergencies.

Since 1970, when what is now section 109(D)2 was originally enacted in a predecessor law, the Department has been of the view that the Manufacturer Chemists Association, Chemtrec system, provides just such a 24-hour centralized hazardous material emergency response capability.

I would point out that one of my predecessors, even before 1970, Mr. Williams, when he was in charge of this operation, is probably the person principally responsible for encouraging and stimulating the industry to establish Chemtrec.

In a series of efforts that predated the 1970 legislation, and perhaps served as a model for that first requirement for such a system, Mr. Jennings encouraged successfully the industry to establish Chemtrec.

Considerable Federal staffing and support resources would be required, of course, to duplicate the Chemtrec capability. The technical information used by Chemtrec is now freely and fully provided by the hundreds of industry participants. It is uncertain as to whether a Federal mandatory arrangement could gain a similar rapport due to the

concerns that would be generated over possible use by the Federal of the information supplied in connection with its enforcement activities.

MR. KEEFE. Has DOT done its own evaluation of the Chemtree system?

MR. SANTMAN. I am pleased that Mr. Roberts is here this morning, and I think perhaps he can speak firsthand and more authoritatively than the earlier witnesses on the operation of Chemtree and its day-to-day activities, and its relationship with our office.

If you would like, I will depart from my statement now and explore that for a while, if you prefer.

MR. KEEFE. For the record, please have Mr. Roberts submit his comments on the validity of the Chemtree system to the mission of the Material Transportation Bureau.

[The following information was subsequently received for the record:]

MR. ROBERTS. CHEMTREC is viewed by the Materials Transportation Bureau (MTB) as a valuable public service of the Manufacturing Chemists Association (MCA). CHEMTREC is located at MCA's offices in Washington, D.C. The MCA is a trade association of 165 chemical manufacturers representing more than 90% of the production capacity for basic industrial chemicals in the United States and Canada. CHEMTREC has been in operation since September 1971.

CHEMTREC provides immediate advice on an around-the-clock basis for those at the scene of emergencies, and then contacts the shipper of the chemicals involved for more detailed assistance and the appropriate follow-up.

CHEMTREC encourages shippers to include on hazardous materials shipping documents a notice stating that "For help in chemical emergencies involving spill, leak, fire, or explosion, call toll free 800-424-9300 day or night."

The Department of Transportation and MTB recognize the capabilities of CHEMTREC and through its various publications such as the Emergency Action Guide for Selected Hazardous Materials, mentioned earlier, advises the transportation and emergency response communities of the nature and availability of CHEMTREC's services.

Emergency response personnel such as the fire and police are normally well prepared to cope with common materials, including certain flammables such as fuel oil and gasoline. However, exotic fuels and chemicals are being shipped in increasing quantities and emergency response personnel often are not aware of what steps to take or not to take with many of these unusual and exotic substances. CHEMTREC helps provide accurate and clearly understandable information to help them evaluate the situation and act with proper precautions for their own safety, as well as for the protection of the general public.

Realizing that personnel of chemical producers possessed the necessary expertise, officials of both the Departments of Transportation and Health, Education and Welfare approached MCA in 1970. A study was undertaken by industry safety, packaging, and transportation specialists. On the basis of the study, it was concluded that a single center, nationwide in coverage and accessible to all through a single telephone number, would be the most expeditious and beneficial arrangement to receive and disseminate necessary emergency chemical information. Thus, CHEMTREC came into existence.

CHEMTREC operates with persons who answer emergency calls that are not scientists. They are chosen for their ability to remain calm under emergency stresses. To preclude unfounded personal speculation regarding a reported emergency, they are under instructions to abide strictly by the information prepared by technical experts for their use.

Each emergency call is recorded in writing and by tape recorder with the CHEMTREC phone communicator attempting to determine the name of the caller and call back number; the location of problem; the shipper or manufacturer; the container type; the rail car or truck number; the carrier name; the consignee; and the local conditions. This is to enable him to provide the best available information on the chemical(s) reported to be involved, thereby giving a specific indication of the hazards.

The first stage of assistance is to provide the caller with advice on the immediate steps that should be taken as well as what not to do. This is done using prepared and immediately accessible information on over 18,000 various chemicals.

Trade names and synonyms of chemical names are cross-referenced for ready identification by whatever name is given by the caller.

Having advised the caller, the communicator proceeds immediately to the second stage by notifying the shipper by phone as to the known particulars of the emergency. Thus alerted, the shipper can dispatch personnel to the scene, provide direct advice to the scene, or take such other steps as may seem warranted.

As circumstances warrant, CHEMTREC also notifies the National Transportation Safety Board and the appropriate offices of other agencies of emergency calls it receives.

If the shipper is unknown, the second stage may require the communicator to call on other sources of assistance such as one of the mutual aid programs under which one producer will service field emergencies involving another producer's product. In such cases, initial referral may be in accord with the applicable mutual aid plan rather than directed to the shipper. Arrangements of this sort are established on chlorine through the Chlorine Institute and on pesticides through the National Agricultural Chemicals Association.

The Chlorine Institute supports CHLOREP, the Chlorine Emergency Plan, in which the nearest producer responds to a problem. NACA has a Pesticide Safety Team Network of some 40 emergency teams distributed throughout the country. CHEMTREC serves as the communication link for both programs.

The Materials Transportation Bureau feels, in light of both the successful history of CHEMTREC and the contemplated time, manpower effort and enormous monetary expenditures which would be needed to duplicate CHEMTREC with an operational "Governmental CHEMTREC", that the present privately operated system should be encouraged to continue its outstanding work.

Mr. SANTMAN. Very well, realizing that community action plans and trained personnel are needed to carry out, assess, and effectively deal with hazardous material transportation incidents when they do occur, the Materials Transportation Bureau contracted with the National Fire Protection Association for the development of a comprehensive training course for emergency response personnel.

The 20-hour course that has been developed under this contractual arrangement stresses the importance of defining the roles and responsibilities of the various concerned response groups and places particular emphasis on the communication and command considerations.

Additionally, the course presents a general overview of hazardous materials transportation characteristics, classification of materials and sources of technical assistance, and the situation analysis and decision-making.

It involves a considerable amount of the situation analysis and simulation that Senator Schmitt had reference to from his experiences. Perhaps its most important features is its guidelines for the police and fire departments for their development and implementation of their own community emergency response plans.

The course will be available for distribution early in May. I have seen a number of advertisements already and scheduling of courses in various fire and police publications. I believe it will prove a useful tool for strengthening the emergency planning and response capability of individual communities, both large and small.

We have primarily the smaller ones. We have already touched on the question of proposed legislation that is here today. I will not go over that. That concludes the summary of the testimony that I had submitted, and I will deal with any additional questions you may have.

Mr. KEFFE. Senator Durkin has sent word that he's been detained on the Senate floor for a series of votes. He did indicate that he has a continuing interest in this subject of the Material Transportation

Bureau, and he looks forward to an opportunity in the near future to discuss your programs again.

So at this time we will adjourn the hearing this morning. Thank you.

[The statement follows:]

STATEMENT OF L. D. SANTMAN, ACTING DIRECTOR, MATERIALS TRANSPORTATION BUREAU, RESEARCH AND SPECIAL PROGRAMS DIRECTORATE, DEPARTMENT OF TRANSPORTATION

Mr. Chairman and members of the committee, I am pleased to be before your committee to discuss the Department of Transportation's hazardous materials program, particularly the activities since the last authorization hearings on the Hazardous Materials Transportation Act, held in 1976.

The authority under current legislation to appropriate funds expires at the close of this fiscal year. We are before this Subcommittee seeking legislation to authorize future appropriations in support of the continuing efforts of the Department and the Administration to ensure safe movement of hazardous materials in commerce. During the past two years, there have been a number of regulatory and enforcement program initiatives, and we have made significant advancements in implementing the provisions of the Hazardous Materials Transportation Act.

The hazardous materials program is conducted by five of the operating elements in the Department of Transportation. To ensure a uniform approach to regulation, the Secretary delegated the major rulemaking responsibility to the Materials Transportation Bureau, when it was established in July 1975. With one exception, formulation and issuance of regulations are Bureau responsibilities. Regulation of bulk transportation of hazardous materials by the marine mode remains the responsibility of the Coast Guard, which issues and enforces the applicable regulations. Internal Departmental procedures specify that hazardous materials transportation rulemaking matters peculiar to a single mode of transportation will be dealt with by the cognizant operating administration in terms of evaluation and development of substantive provisions of regulations and coordination with the Bureau's Office of Hazardous Materials Operations, which performs a review function with particular emphasis on the hazardous materials concerned. Notices of proposed rulemaking and exemptions are then issued by the Director of the Office of Hazardous Materials Operations and final regulations by the Director of the Materials Transportation Bureau.

The Hazardous Materials Transportation Act extended the Department of Transportation's regulatory authority to the manufacturers of packagings and containers used in the transportation of hazardous materials. The Materials Transportation Bureau exercises compliance and enforcement authority primarily over these entities and multimodal shippers of hazardous materials. The Department's four modal operating administrations—the Federal Aviation Administration, the Federal Highway Administration, the Federal Railroad Administration, and the United States Coast Guard—have responsibility for conducting technical research and enforcing regulations pertaining to the respective modes of transport, in addition to contributing to the development of the Bureau's regulations. Inspection, compliance and enforcement actions related to carriers by the specific modes are planned and carried out by these administrations. There were several considerations that led to the operating administrations' retention of this responsibility. First, adequate inspection requires that hazardous materials inspectors have a working knowledge of the mode by which a shipment is being carried. Second, the operating administrations have existing field forces with considerable experience in inspecting hazardous materials shipments. However, the Secretarial delegations do not draw a rigid line around enforcement responsibilities of the administrations versus the Bureau. Rather, there is sufficient flexibility to allow a Bureau technical expert in hazards of materials or containers to participate in an enforcement case involving a carrier. Similarly, should a Federal Railroad Inspector detect a violation by a container manufacturer, he is authorized to pursue that case.

The increasing diversity of hazardous materials technology, the requirements for shipping materials over greater distances, and increased emphasis on international transportation of hazardous materials have contributed to the expansion of the overall transportation industry and to more intermodal transfers of hazardous materials. The resulting increase in complexity requires careful co-

ordination of regulatory and enforcement activities within the Department of Transportation to ensure uniformity and preclude duplicative efforts.

Recognizing the need for a strong and efficient organizational structure to support the multimodal hazardous materials program, the Secretary of Transportation, in the recent reorganization of his immediate staff offices, consolidated technical and research functions and placed the Materials Transportation Bureau along with them in the new Research and Special Programs Directorate. The hazardous materials mission and operational program of the Bureau remain unchanged, but this new organizational alignment strengthens the support services available, particularly those in areas of administrative, budgetary, and research and technology capability. Under this parent organization, a number of relationships are developing or expanding, including those of the Bureau with the Transportation Systems Center in Cambridge, Massachusetts, in the areas of data and information systems and laboratory testing, and the Transportation Safety Institute in Oklahoma City, in hazardous materials training and educational programs.

The Materials Transportation Bureau's internal organization has sustained the identity and structures of the Offices of Pipeline Safety Operations and Hazardous Materials Operations as they existed in the Office of the Secretary prior to the Bureau's establishment. A reorganization proposal, currently pending final approval by the Secretary, will enable the Bureau to restructure into four offices—separate Offices of Pipeline Safety Regulation and Hazardous Materials Regulation, an Office of Operations and Enforcement, and an Office of Program Support. This realignment of functions, by consolidating the common operational and support-type activities which generally involve similar procedures, will enable more effective utilization of resources across the two safety programs. Moreover, I expect the separation of responsibility and management of establishing the rules from implementing and enforcing them to improve both aspects of the hazardous materials program.

This background on how the Department of Transportation is organizationally set up to regulate hazardous materials transportation is particularly relevant to some recent program initiatives and achievements. An area of concern has been the complexity and resultant degree of difficulty in understanding and using the hazardous materials regulations. Less than two years ago, the hazardous materials regulations governing transportation by air, rail, highway, and water, and previously contained in three different volumes of the Federal Code (Title 49, Title 46, and Title 14), were consolidated and reduced by approximately 700 pages. In addition to the consolidation of the regulations, similar portions from each title were standardized and organized together for ease of understanding. As an example, the regulations dealing with shipping papers, marking, labeling, and placarding were made uniform and consolidated into Part 172 of Title 49 to form the Hazardous Materials Communications Regulations. The completely revised communication system prescribes uniform labels and placards which facilitate intermodal transfers and which are readily identifiable by both routine handlers and emergency response personnel who need to be alert to any actual or potential risk. These new regulations include an expanded list of definitions to enable understanding of the various terms which previously were associated with only one mode of transportation.

This consolidation has encouraged compliance with the regulations, as well as aided the Department's surveillance and enforcement efforts. The same rule-making action removed certain regulatory requirements from small-package goods, including common household items such as cleaning solvents and aerosol packaged deodorants, which present little hazard in transportation. The new materials classification, Other Regulated Materials or ORM's, exempts limited quantities of such consumer goods from labeling and packaging requirements.

In addition to issuing, modifying, or terminating the hazardous materials regulations to improve clarity and to facilitate intermodal and multimodal shipments in commerce, the Department of Transportation participates in the development of international hazardous materials transport standards, not only to achieve safety, but also to assure a uniform acceptance of United States hazardous materials transportation practices which have proven safe and reliable through our own experience. The United States position has been to promote a world-wide system that provides necessary consistency between modal and regional recommendations to insure that, insofar as practical, hazardous materials shipments may move freely between the various modes and regions of the world in full compliance with the applicable regulations. Department of Trans-

portation personnel participate actively with the United Nations Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods in developing international standards for identifying hazardous materials and communicating their hazards. During the past year the United States sponsored a number of proposals, including recommended criteria for the classification of liquids presenting toxic risks in transport as a result of their volatility, and a proposal for standard world-wide requirements pertaining to documentation, marking, labeling, and placarding of dangerous goods in international commerce. The Department of Transportation participates with other intergovernmental "specialized" agencies, such as the Intergovernmental Maritime Consultative Organization and the International Civil Aviation Organization, which primarily develop recommendations of an operational nature to insure safe transportation of the hazardous materials by the involved mode of transportation, and the International Atomic Energy Agency which develops international standards for transport of radioactive materials.

Whereas simplifications, clarification and uniformity have been important regulatory concerns, the primary factor in establishing rulemaking priorities and plans is the requirement of safety to life and property. For example, as a result of a series of accidents involving uninsulated pressure tank cars carrying such hazardous gases as liquefied petroleum gas or propane, vinyl chloride, and anhydrous ammonia, the Materials Transportation Bureau and the Federal Railroad Administration put great emphasis on seeking appropriate regulatory solutions to the problem. The regulations promulgated under Docket HM-144 were the result of that effort.

In September 1977, the hazardous materials regulations were amended to require tank car owners to (1) retrofit DOT Specification 112 and 114 tank cars with headshields or protective head jackets to reduce the number of head junctures caused by the impact of couplers or broken coupler shanks; (2) install on the 112 and 114 cars bottom and top shelf couplers capable of resisting vertical disengagements to reduce coupler overrides that are the principal cause of head punctures; and (3) install thermal protection on cars used to transport flammable gases to prevent overheating of the contents and reduce the potential for boiling liquid expanding vapor explosions (BLEVE's).

The new regulations require these features on all new 112 and 114 tank cars constructed after January 1, 1978, and provides for retrofitting of existing 112 and 114 tank cars in phases, but all changes must be made by January 1, 1982. While the regulations provided what was considered to be an appropriate time table for the thermal protection, head protection, and coupler retrofits, the recent rash of derailments has led the Federal Railroad Administration and the Materials Transportation Bureau to undertake a reconsideration of the timetable to determine if accomplishment of the requirements can be accelerated. As you may be aware, the Federal Railroad Administration conducted a hearing last Friday, the 7th of April, as part of a Departmental effort to determine whether it is feasible to accelerate this schedule. It is the Department's technical opinion that when the retrofit program is concluded, the safety measures will be very effective in reducing serious lading incidents involving these tank cars. Certainly, industry implementation of these new requirements will significantly reduce the potentially severe consequences of tank car derailments and coupler overrides, and early retrofit can improve safety.

The Materials Transportation Bureau's centralized reporting system is the Department of Transportation's primary source of hazardous materials "incident" data. For reporting purposes, an incident is defined as any unintentional release of hazardous materials, ranging from a spill of a small quantity of paint, battery acid, or other less hazardous materials to major vehicular accidents involving hazardous materials release resulting in fire or explosion. During 1977, carriers reported 15,954 incidents, a 34 percent increase over the 11,898 incidents reported in 1976 (see Attachment A). It should be noted, however, that this increase in reported accidents may in large part be attributed to increased industry awareness of DOT reporting requirements.

A sampling of incident reports submitted in 1976 involving releases from highway cargo tanks and trailers indicated that 84 percent of the incidents resulted from human errors (including those which caused vehicular accidents), while 16 percent resulted from equipment failure. These figures do not preclude noncompliance with the regulations as a contributing factor. Noncompliance can be determined only by on-site investigation. Information furnished in 1976

by carriers indicated that 24½ percent of reported incidents involved possible or probable regulatory noncompliance by the carrier, 14½ percent possible or probable noncompliance by the shipper, and 3½ percent possible violations by both the carrier and the shipper or by the container manufacturer. The remaining 57½ percent did not appear to involve regulatory noncompliance.

Since the most effective incident preventive measure is sound, clearly stated and well-understand safety regulations, the Materials Transportation Bureau plans with the additional resources requested for Fiscal Year 1979 to increase its emphasis on reviewing existing regulations and acting upon formal petitions for rulemaking.

Responding to both the President's recent Executive Order 12044 on improving government regulations and the Secretary of Transportation's internal memorandum on the same subject published in the Federal Register on March 8, the Materials Transportation Bureau has developed a Regulatory Review and Development Plan. A copy of this first annual publication is provided in Attachment B. Future publications of the plan are expected to project beyond one year and eventually address projects to be accomplished over the ensuing five or more years with a level of priority assigned to each project. Although we believe this plan to be a realistic statement of planned MTB rulemaking activities and resource commitments for the forthcoming year, as with any plan of this type, allowances must be made for regulatory projects not contemplated at the time of its initial preparation.

Enforcement activities of the Department are known to promote safety through deterrence of noncompliance with the regulations. The application of legal sanctions in the area of hazardous materials transportation has significantly increased recently, particularly by the Federal Railroad Administration and the Materials Transportation Bureau.

In January 1977, the Bureau reissued the hazardous materials regulations under the authority of the Hazardous Materials Transportation Act, therefore providing civil penalty authority and increased criminal sanctions. Violations of hazardous materials regulations have in the past been punishable by criminal penalties by all modes, but only the Federal Aviation Administration and the U.S. Coast Guard had authority to assess civil penalties. The Federal Railroad Administration published in the *Federal Register*, in October 1977, its procedures for carrying out civil penalty sanctions and has stated that hazardous materials regulations enforcement is receiving top priority. Because of their concern over the recent accidents and derailments, they plan to continue their emphasis in this area. Since the Federal Highway Administration published its procedures for processing claims in April 1977, it has initiated 37 actions for civil penalties.

Also in January 1977, the regulations prescribing the Materials Transportation Bureau's enforcement procedures under Section 110 of the Hazardous Materials Transportation Act became effective. In September the Bureau started initiating civil penalty actions for violations by container manufacturers and shippers. To date 13 penalties totaling \$17,850 have been assessed and collected and one compliance order has been issued. Five additional actions are pending.

Assessed penalties have ranged from \$200 to \$9,000. Representative examples of the violations include a drum reconditioner's failure to properly retest and mark a non-DOT specification drum as a qualified container; a corrugated fiberboard box manufacturer's failure to construct a box in accordance with the DOT specification marked on it; a shipper's failure to properly describe a material on the shipping paper, to mark containers properly, and to use containers meeting the required DOT specifications; and a shipper's reuse of a non-reusable compressed gas cylinder.

In 1977, the Department of Transportation had 234.9 person-years available for the hazardous materials compliance enforcement program. Safety inspectors conducted a Department-wide total of 19,792 inspections of facilities, 59,025 inspections of transport vehicles, and 713 accident investigations. Attachments C and D contain breakdowns of these inspection and investigation activities in conjunction with the number of inspectors and enforcement cases for each operating administration.

At present only the Federal Highway Administration has cooperative agreements, generally of a voluntary nature, with State agencies in regard to enforcing the Federal hazardous materials regulations. However, as local and State authorities become more interested in regulating transportation of hazardous

materials through their jurisdictions, the relationship between Federal and State regulatory agencies is a matter of increasing concern.

In enacting Section 112 of the Hazardous Materials Transportation Act, the Congress endorsed the principle of Federal preemption in order to preclude a multiplicity of State and local regulations and the potential for varying, as well as conflicting, regulations in the area of hazardous materials transportation. The Materials Transportation Bureau has implemented regulations under 49 CFR Part 107 which provide for preemption by the Secretary of any requirements of a State or political subdivision which are not consistent with requirements promulgated under the Act. Further provisions are made for petitions to the Department by States or political subdivisions to continue in force any requirements which have been determined to be not consistent, provided that it can be shown such requirements do not unduly burden commerce. In this manner, we have established a mechanism for resolving or accommodating many of the differences that exist or are likely to arise between Federal and State or political subdivision requirements.

As I am sure you are aware, in 1976, New York City forbade the transportation of most radioactive materials within its boundaries. Last week the Bureau issued, at the request of a Long Island highway shipper, an administrative opinion concerning preemption of the City's ordinance under the Act. Although that opinion stated that the New York City code is not inconsistent with the requirements of the Hazardous Materials Transportation Act or regulations issued under it to date, it does not preclude the possibility that other Federal statutes may, in fact, preempt the ordinance. The ruling does, however, recognize that there may be a need for prescribing routing requirements for highway carriage of radioactive materials. Within 60 days, the Bureau will issue an Advance Notice of Proposed Rulemaking to solicit public comments to aid in the decision as to whether the Federal Government should designate routing requirements for certain hazardous materials by selected modes. A copy of our decision is in Attachment E.

Of course, State and local ordinances are prompted by concerns for the safety of their citizens. It is the Department of Transportation's responsibility, as mandated by the Congress, to ensure such safety to life and property while not impeding the flow of hazardous materials in commerce. Our safety program consists not only of regulation, inspection, and enforcement, but also education and training of those involved in shipping, handling, or carrying hazardous materials.

The Transportation Safety Institute, a sister element in the Research and Special Programs Directorate, with our financial and technical support, develops and conducts in-depth training of industry personnel, as well as Departmental inspectors concerned with hazardous materials regulations compliance (see Attachment F). The Materials Transportation Bureau and the operating administrations conduct additional training sessions and routinely participate in private industry sponsored training programs (see Attachment G). Additionally, we maintain approximately 30 fact sheets and pamphlets on regulatory provisions and in 1977 distributed over 775,000 items in response to 5,200 requests. We currently are working with the Nuclear Regulatory Commission to disseminate newly developed guides for handlers of radioactive materials in transportation.

The recent series of derailments and resulting releases of hazardous materials have underscored the fact that adequate hazardous materials containment regulations are not enough to prevent accidents and human disruption. We in the Department of Transportation and the concerned transportation industry must devote more attention to providing communities and emergency response personnel with the technical information necessary to plan for and respond to hazardous materials transportation emergencies when they do occur.

Assistance of various types is generally required of and often provided by the shippers, nearby industries, and military organizations in amelioration of spills. An ever-increasing number of local jurisdictions are, as a part of cooperative community emergency response planning, attempting to provide for handling and containment of spills. However, availability of resources at the local level is a continuing problem and, additionally, there is a need for better guidelines to enable local action in developing such plans.

During 1977, the Department's Transportation Safety Institute held 22 emergency services workshops, attended by nearly 1,000 emergency services personnel and State training officials. In addition, the MTB has recently issued the 1978 edition of the "Emergency Action Guide for Selected Hazardous Materials." The manual outlines the hazards of certain materials and contains technical information which will help emergency personnel during the first 30 minutes following a spill involving volatile, toxic, gaseous and/or flammable material shipped in bulk. General and specific safety procedures to follow are provided in spill guides arranged alphabetically by hazardous material. This manual has been revised and reprinted a number of times since its development in 1973, and over a half million copies have been distributed.

In regard to providing emergency response information, Section 109(d) (2) of the Hazardous Materials Transportation Act requires the Department of Transportation to establish and maintain a central reporting system and data center to provide law enforcement and firefighting personnel with advice on meeting hazardous materials transportation emergencies.

Since 1970, when what is now Section 109(d) (2) was just enacted, the Department has been of the view that the Manufacturing Chemists Association's CHEMTREC system provides just such a 24-hour centralized hazardous materials emergency response capability. Considerable Federal staffing and support resources would be required to duplicate the CHEMTREC program. Much of the technical information used by CHEMTREC is now freely and fully provided by hundreds of industry participants. It is questionable as to whether a Federal mandatory arrangement could gain a similar rapport due to concerns that would be generated over the possible Federal use of information, supplied for emergency information purposes, for other activities such as enforcement.

Realizing that community emergency action plans and trained personnel are needed to correctly assess and efficiently deal with hazardous materials transportation incidents when they do occur, the Materials Transportation Bureau contracted with the National Fire Protection Association for the development of a comprehensive training course for emergency response personnel. The 20-hour course stresses the importance of defining the roles and responsibilities of the various concerned response groups and places particular emphasis on communication and command considerations. In addition, the course presents a general overview of hazardous materials transportation, characteristics and classification of materials, sources of technical assistance, and situation analysis and decision making, but perhaps its most important feature is its guidelines for use by local fire departments and police departments in their development and implementation of their own community emergency response plans. The course will be available for distribution early next month. I believe it will prove a useful tool for strengthening the emergency planning and response capability of communities.

Regarding proposed hazardous materials authorization legislation, the Administration has requested authorization for such sums necessary to carry out responsibilities under the Act for Fiscal Years 1979 and 1980. If the Committee desires that specific annual amounts be authorized, we believe the level should provide sufficient latitude to meet both foreseeable program needs and any requirements which might arise from unanticipated events.

This completes my statement, Mr. Chairman. I would be happy to answer any questions the Committee may have.

ATTACHMENT A

HAZARDOUS MATERIALS INCIDENT REPORTS AND INVESTIGATIONS: 1976-77

Mode	Incidents reported		Reporting carriers		Fatalities		Injuries		Investigations	
	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977
Air carriers.....	84	130	24	50	0	0	4	9	100	130
Highway carriers (for-hire).....	10,255	13,000	423	500	12	13	568	488	317	269
Highway carriers (private).....	572	1,250	125	150	4	17	49	60		
Rail carriers.....	959	1,500	42	50	2	1	198	233	373	314
Water carriers.....	15	50	8	20	0	0	1	0	0	0
Freight forwarders.....	12	20	8	10	0	0	0	0	0	0
Total.....	11,897	15,950	636	780	18	31	820	750	790	713

ATTACHMENT B
SEMIANNUAL REGULATIONS REPORT (MTB-OHMO)

Title	Summary	Contact	Date
I. MAJOR REGULATIONS			
Development of new standards for transportation of hazardous waste materials. (Project No. 260-78.)	A. Summary: New standards and procedures for the transportation of hazardous materials. B. Why major: Major rulemaking due to its significant impact on the operating administrations and another Federal agency. C. Chronology: NPRM jointly developed with EPA; public hearing held on Oct. 26, 1977; targeted date of issuance June 1, 1978; targeted date of final rule to be issued Oct. 1, 1978. D. Citation: 49 CFR pts. 171, 172, 173, 174, 175, 176, and 177.	A. Roberts, 426-0656.	NPRM, June 1978.
Preemption/safe routing of radioactive materials. (Project No. 269-78.)	A. Summary: Consideration of an administrative ruling as applied to transportation routing of hazardous materials. B. Why major: Major rulemaking due to substantial public interest and controversy; and has a significant impact on another operating agency. C. Chronology: Published a public notice and invitation to comment on Aug. 15, 1977; public hearing was held on Nov. 10, 1977; targeted date of issuance of NPRM, July 1, 1978; targeted date of final rule, Nov. 1, 1978. D. Citation: 49 CFR pt. 107.	D. Crockett, 755-4972.	ANPRM, July 1978.
II. NONMAJOR REGULATIONS			
Cryogenic liquids. (Docket No. HM-115.)	Standards and procedures for the transportation of cryogenic liquids.	P. Seay, 755-4906.	NPRM, November 1978.
Intermodal portable tank. (Project No. 193-72.)	Standards for new specifications for portable tanks and procedures for use of these portable tanks for certain hazardous materials.	A. Roberts, 426-0656.	NPRM, August 1978.
Use of metric system. (Project No. 258-77.)	To allow the use of metric system of measurements in place of the present U.S. liquid measure and the avoirdupois weight measurement.	-----do-----	NPRM, June 1978.
Recodification of operating procedures for motor vehicles. (Project No. 261-78.)	Simplification and recodification of the existing operating procedures for transportation of hazardous materials by motor vehicles as prescribed in pt. 177.	D. Goodman, 426-1700.	NPRM, March 1979.
Recodification of radioactive requirements. (Project No. 262-78.)	Consolidation, simplification and recodification of the existing requirements applicable to the transportation of radioactive materials.	A. Grella, 426-2311.	NPRM, September 1978.
Use of United Nations materials shipping terminology/numbers. (Project No. 266-78.)	Incorporation of shipping descriptions and serial numbers from United Nations regulations covering the transport of dangerous goods.	A. Roberts, 426-0656.	NPRM, December 1978.
Operating safety concerns for aircraft. (Project No. 265-78.)	Standards for the safe operation of aircraft having certain hazardous materials aboard.	G. Tenley, 755-4972.	NPRM, November 1978.
Availability of shipping papers to emergency response personnel. (Project No. 259-78.)	To require shipping papers covering hazardous materials to be made available by train crew to emergency personnel.	J. Horning, 755-4902.	Do.
Revision of certain requirements applicable to radioactive materials. (Project No. 267-78.)	To require labeling of exempted radioactive materials packages and notation on shipping papers regarding losses of radioactive shipments.	A. Grella, 426-2311.	VPRM, December 1978.
Definition of a flammable solid. (Docket No. HM-118.)	New standards for classifying a material as a flammable solid.	C. Schultz, 755-4906.	NPRM, March 1979.
Blasting agents. (Docket No. HM-143.)	New standards for the transportation of blasting agents.	-----do-----	FR, September 1978.
Forbidden materials. (Docket No. HM-159.)	Proposed standards to add the names of materials to the hazardous materials table that are known to be too hazardous to be permitted in commercial transportation.	-----do-----	NPRM, February 1979.
Transportation of asbestos. (Docket No. HM-160.)	Standards of control asbestos emissions during transportation.	A. Roberts, 426-0656.	FR, August 1978.

ATTACHMENT B—Continued

SEMIANNUAL REGULATIONS REPORT (MTB-OHMO)—Continued

Title	Summary	Contact	Date
Radiation exposure of transportation workers. (Project No. 263-78.)	Consideration of methods which will reduce radiation exposure levels to transportation workers.	A. Grella, 426-2311.	NPRM, March 1979.
Retrofit program for DOT 112 and 114 tank cars. (Docket No. HM-144.)	Consideration of possible changes in the current schedule to retrofit DOT 112 and 114 tank cars with safety devices.	W. Black, 426-2748.	NRPM, May 1978.
Safety improvement program for DOT 105 tank cars. (Project No. 264-78.)	Consideration of possible changes to current safety performance standards of DOT 105 tank cars.	-----do-----	NPRM, July 1978.
Repairs and maintenance of vehicles. (Docket No. HM-110.)	Establish conditions under which repair and maintenance may be performed on motor vehicles containing hazardous materials.	D. Goodman, 426-1700.	FR, July 1978.
Location of manhole assemblies and certification plates on cargo tanks. (Docket No. HM-136.)	Specifies the location of a manhole assembly on a cargo tank and authorizes the attachment of certification plates to an integral supporting structure of certain cargo tanks.	J. Horning, 755-4902.	FR, August 1978.
Requirements for radioactive materials. (Docket No. HM-152.)	Revision of certain sections of pt. 175 which will reduce the exposure to radioactive materials for passengers aboard aircraft.	A. Grella, 426-2311.	FR, January 1979.
Color coding of compressed gas packages. (Docket No. HM-141.)	Reconsideration of color standard to be applied to compressed gas cylinders as a safety measure.	A. Roberts, 426-0656.	Withdrawal, September 1978.
Conversion of individual exemptions and minor regulatory adjustments to regulations of general applicability. (Docket No. HM-139.)	Incorporation of provisions for selected exemption applications or existing exemptions and incorporation of miscellaneous minor changes based on petition requests.	D. Raines, 755-4962.	NPRM, every 2 mo.
Commercial detonators and detonating primers. (Project No. 268-78.)	Standards for establishing appropriate shipping descriptions and hazard classifications for many detonators which are currently used in commercial service.	C. Schultz, 755-4906.	NPRM, June 1978.

ATTACHMENT C

HAZARDOUS MATERIALS INSPECTORS, 1977

	USCG	FAA	FHWA	FRA	RSPD	Total
Full-time inspectors.....	0	20.0	9.0	16.0	5.0	50.0
Part-time inspectors:						
Number of inspectors.....	(717)	(129)	(128)	(42)	(3)	(1,019)
Percent of time.....	(15)	(35)	(20)	(15)	(6)	-----
Person-years.....	107.6	45.2	25.6	6.3	.2	184.9
Total person-years.....	107.6	65.2	34.6	22.3	5.2	234.9

HAZARDOUS MATERIALS INSPECTIONS AND INVESTIGATIONS, 1977

Operations/facilities:						
Carriers.....		11,892	1,662	2,208	20	15,782
Shippers.....			1,267	613	35	1,915
Container manufacturers.....			194	41	26	261
Freight forwarders.....				93	2	95
Waterfront.....	1,736				3	1,739
Vehicles/vessels:						
Railroad tank cars.....				9,700		9,700
Railroad freight cars.....				5,040		5,040
Vessels.....	40,842					40,842
Motor vehicles.....			3,443			3,443
Accidents/incidents.....		130	269	314		713
Total.....	42,578	12,022	6,835	18,009	86	79,530

ATTACHMENT D

HAZARDOUS MATERIALS REGULATIONS VIOLATIONS AND ENFORCEMENT ACTIONS

Operating administration and action	1976	1977	Change	Percent change
USCG (bulk and nonbulk):				
Violations for which—				
Civil penalty actions initiated	988	1,836	+848	+86
Civil penalty actions completed	240	430	+190	+79
Total collected	\$85,660	\$130,620	+\$44,960	+52
Average penalty collected	\$357	\$304	-\$53	-15
FAA:				
Civil penalty actions initiated	116	105	-11	-9
Civil penalty actions completed	94	103	+9	+10
Total collected	\$81,675	\$72,600	-\$9,075	-11
Average penalty collected	\$869	8705	-\$164	-19
FHWA:¹				
Criminal cases initiated				
Criminal cases completed				
Fines adjudged				
Average fine				
FRA:				
Criminal cases initiated	1	18	+17	
Criminal cases completed	0	5	+5	
Fines adjudged	0	\$4,350	+\$4,350	
Average fines	0	\$870	+\$870	
Prosecution declined by Department of Justice	1	9	+8	
Civil penalty actions ²	10	14	+4	+40
Total collected	\$15,500	\$23,225	+\$7,725	+50
Average penalty collected	\$1,550	\$1,660	+\$110	+7
RSPD:³				
Criminal penalties initiated	0	0	0	0
Civil penalty actions initiated	0	14	+14	
Civil penalty actions completed	0	7	+7	
Compliance orders initiated	0	1	+1	
Compliance orders completed	0	0	0	
Total collected	0	\$3,850	+\$3,850	
Average penalty collected	0	\$550	\$550	
Warnings	133	42	-91	

¹ Data will be forthcoming.

² Actions undertaken by FRA, under the Federal Railroad Safety Act of 1976, for alleged violations of emergency order No. 5 prohibiting humping and cutting off while in motion DOT 112A and 114A placarded tank cars.

³ RSPD/MTB initiated its enforcement program in October 1977. No enforcement work had been accomplished by MTB prior to that date.

ATTACHMENT E

DEPARTMENT OF TRANSPORTATION—RESEARCH AND SPECIAL PROGRAMS DIRECTORATE,
MATERIALS TRANSPORTATION BUREAU

(Inconsistency Ruling (IR-1)—April 4, 1978)

Applicant: Associated Universities, Incorporated, Upton, Long Island, New York 11973.

Respondent: City of New York (Bureau for Radiation Control, Department of Health).

Laws Affected:

Local.—New York City Health Code, § 175.111, as amended through January 15, 1976, prohibiting transportation of radioactive materials in or through the City.

Federal.—HMTA, §§ 104, 105. 49 CFR Parts 170-173, 177.

Mode Affected: Highway.

Ruling: Section 175.111 of the New York City Health Code, as amended through January 15, 1976, is not inconsistent with requirements of the HMTA or with requirements in regulations issued to date thereunder.

Announcement of intent to commence rulemaking to consider the need for routing requirements under the HMTA for highway carriage of radioactive materials.

I. BACKGROUND

A. Chronology of the Inconsistency Ruling Application of Associated Universities, Incorporated

Associated Universities, Incorporated (AUI) is a corporation chartered by the New York State Board of Regents. AUI's Board of Trustees includes members from nine northeastern universities. Since 1947, AUI has operated Brookhaven National Laboratory at Upton, Long Island, under a prime contract with what is now the United States Department of Energy (DOE). Two research reactors in use at Brookhaven consume fuel consisting of enriched uranium and produce a variety of other radioactive materials. Spent fuel from the reactors is stored at Brookhaven until shipped to a recovery facility for reclamation of valuable materials and eventual disposal of the rest. Brookhaven's practice has been to ship spent fuel six times over a six-week period each year. In the past, both the fuel used by the Brookhaven reactors and the by-products have moved extensively in interstate commerce, subject to the Department's Hazardous Materials Regulations (49 CFR Parts 170-179).

For highway carriers of radioactive materials, access to the mainland from Long Island was, and still is, controlled by regulations of the New York and New Jersey Port Authority (Port Authority), the Triborough Bridge and Tunnel Authority (Triborough Authority), as well as by the City itself. The facilities in the Port area that connect New York with New Jersey are generally regulated by the Port Authority. The Triborough Authority controls the area's interstate toll crossings, while the four lower Manhattan bridges across the East River from Brooklyn and Queens are operated by the City's Department of Transportation. Between the requirements of the Port and Triborough Authority, a hazardous materials highway carrier must cross one of the City bridges to reach the mainland from Long Island. Prior to enactment of Section 175.111, the City allowed radioactive materials carriers to cross only the lower level of the 59th Street Bridge with a police escort that was generally required while the carrier moved through the City on one of a number of possible truck routes. Leaving Manhattan for the mainland, under Port Authority regulations, was possible only by crossing the George Washington Bridge into New Jersey. Although the route used by AUI's carriers before Section 175.111 became effective varied somewhat, the 59th Street Bridge and the George Washington Bridge were necessary points in the route, necessitating passage through Manhattan (see map, Appendix A).

Section 175.111 became effective on January 15, 1976, after notice and hearing (Appendix B). It has the practical effect of forbidding the transportation of most commercial shipments of radioactive materials in or through the city. On the same day, the Federal Government asked the Federal District Court for the Southern District of New York for declaratory and injunctive relief, arguing that Section 175.111 is preempted under the Supremacy Clause and the Commerce Clause of the United States Constitution, and by the Atomic Energy Act of 1954 and the regulations issued under that Act.¹ A preliminary injunction was denied, and the case has not yet been argued on the merits. Shortly after the Section 175.111 effective date, several of AUI's shipments of radioactive materials, otherwise subject to Section 175.111, were carried by passenger ferry from Long Island to Connecticut, in order to avoid the City.

On March 1, 1977, AUI, affected by Section 175.111 as well as by the Hazardous Materials Transportation Act (HMTA, Title I of Pub. L. 93-633), filed an application for an inconsistency ruling, asking the Department of Transportation for its opinion as to whether Section 175.111 is inconsistent with, and thus preempted by, the HMTA or regulations issued thereunder, based on the City's interdiction of truck traffic in radioactive materials from AUI's facilities on Long Island, New York, through the City to destinations in other States.

The docket for this proceeding includes extensive public comment as well as the transcript of a public hearing held on November 10 and 11, 1977, all of which is available for public inspection in the Dockets Section, Room 6500, 2100 Second Street, S.W. Washington, D.C. 20590.

B. Department of Transportation Hazardous Materials Regulations

This inquiry concerns requirements of the HMTA and regulations issued under the HMTA. The substantive transportation regulations issued under the HMTA

¹ *United States v. City of New York*, No. 76 Civ. 273 (S.D.N.Y., filed January 15, 1976).

are codified at 49 CFR Parts 170-179 and are referenced as the Hazardous Materials Regulations.

A discussion of the DOT Hazardous Materials Regulations is aided by a familiarity with the basic history of those regulations. Federal regulations concerning hazardous materials shipments by highway have existed since the first decade of this century under the administration of the Interstate Commerce Commission. In 1967 those safety functions were transferred to the Department of Transportation.

On January 3, 1975, the HMTA was enacted, and on January 3, 1977, the DOT Hazardous Materials Regulations were simultaneously cancelled under 18 U.S.C. 834 (for highway carriage) and reissued under the HMTA (HM-134, 41 FR 38175, September 9, 1976), for present purposes, essentially unchanged. On the same date, the preemption regulations, under which this proceeding has been conducted, became effective (HM-138, 41 FR 38167, September 9, 1976).

Several observations may also be useful. First, under 18 U.S.C. 834, the Hazardous Materials Regulations applied to interstate carriers and their shippers, but not to purely intrastate carriers and their shippers. This distinction remains valid at present, although the HMTA authorizes application of the regulations to transportation that affects interstate commerce.² Second, the history of the Hazardous Materials Regulations for highway carriage has been one of an accommodation of Federal and State interests that is pragmatic and that recognizes, as have the courts, that local interest in highway safety is well established and proper, and that a local exercise of police powers in support of that interest is not to be lightly displaced.³ Third, the scope of Federal preemption in air, rail and water transportation is historically greater than in highway transportation. This document examines only highway transportation. The effects of Section 175.111 on the other modes of transportation are not considered.

Generally, the existing DOT Hazardous Materials Regulations address highway transportation by prescribing the packaging necessary for shipment of particular hazardous materials (such as radioactive materials), package marking for the identity of the material contained therein, package labeling for the material's hazards, preparation and use of shipping papers to show the identity, amount and hazard of each material shipped, and placarding of transport vehicles for the hazards of the cargo. The regulations employ a syntax that is prohibitory in nature, such as ". . . no person may transport a hazardous material . . . unless that material is handled and transported in accordance with this subchapter."⁴

Most of the Hazardous Materials Regulations concerning highway carriage were transferred over to the HMTA from Title 18, U.S.C. However, the Federal Motor Carrier Safety Regulations have continued to rely in part on Title 18.⁵ Their application is not limited to hazardous materials carriers, but Part 397 of the Federal Motor Carrier Safety Regulations, which does concern the transportation of hazardous materials, was not reissued along with the Hazardous Materials Regulations because it was anticipated that 49 CFR Part 177, which also deals with highway carriage of hazardous materials, would be revised to incorporate the pertinent requirements of Part 397. Thus, before the HMTA was implemented, the routing instructions in 49 CFR 397.9 and the DOT Hazardous Materials Regulations for highway carriage were parts of essentially one regulatory scheme developed under 18 U.S.C. 834. The present scheme, so far as preemption goes, is bifurcated between the HMTA and Title 18. For reasons subsequently stated, this inconsistency ruling will not attempt to interpret 49 CFR 397.9.

² HMTA, § 103(1). Authority for regulating intrastate commerce is discussed in the preamble to the final rule in Docket HM-134 (41 FR 38175 *et seq.*, September 9, 1976).

³ This view is articulated in cases, such as *South Carolina v. Barnwell Brothers, Inc.*, 303 U.S. 177 (1938), which concern application of the Commerce Clause to State legislation in circumstances that do not involve Congressional action. For a recent similar example, see *Raymond Motor Transportation, Inc. v. Rice*, 46 LW 4109 (February 21, 1978). This view has also been employed by the Supreme Court as a principle of statutory construction. *Welch v. New Hampshire*, 306 U.S. 79, 85 (1939); *Maurer v. Hamilton*, 309 U.S. 598, 614 (1940); *Jones*, at 525.

⁴ 49 CFR 171.2(b).

⁵ 49 CFR Parts 390-397. The Federal Motor Carrier Safety Regulations generally cite § 204 of the Interstate Commerce Act as amended (49 U.S.C. 304) as authority. Part 397, which concerns parking and driving rules for the transportation of hazardous materials, also cites 18 U.S.C. 834, upon which the Department's Hazardous Materials Regulations for highway carriage relied until reissued under the HMTA. The Federal Motor Safety Regulations (except §§ 397.3 and 397.9) have since been incorporated by reference in regulations under the HMTA. HM-157, 43 FR 4858, February 6, 1978.

C. Department of Transportation Preemption Procedures

This proceeding has been conducted pursuant to 49 CFR 107.203-211 and Section 112 of the HMTA (49 U.S.C. 1811). Section 112 of the HMTA expressly preempts "any requirement, of a State or political subdivision thereof, which is inconsistent with any requirement" of the HMTA or regulations issued under the authority of the HMTA. Procedures codified at 49 CFR 107.203-211, which consider prior court decisions regarding Federal preemption, provide a means for the Department to interpret, in specific fact situations, whether a State or local requirement is inconsistent with requirements of the HMTA or the regulations issued thereunder (which include 49 CFR Parts 102, 107 and 170-179). One of the purposes of the preemption regulations issued under the HMTA is to provide, in the field of transportation safety, a source of clarification of this Federal-State relationship as an alternative to litigation. Another purpose is to provide a basis for a waiver of preemption ("nonpreemption determination"), should that be necessary (49 CFR 107.215-225).

The City has argued that the word "inconsistent," as used in Section 112 of the HMTA, is more restrictive than described by regulation at 49 CFR 107.209(c).⁶ Under that description, upon which this proceeding is based, "inconsistency" describes situations wherein it is not possible to comply with both Federal and State requirements, and situations wherein State requirements are an obstacle to the accomplishment and execution of the Federal law. The City asserts that "inconsistent" refers to situations described only by the first test, citing *Jones v. Rath Packing Co.*, 430 U.S. 519 (1977). However, an analysis of *Jones* indicates that the case does not stand for the proposition that "inconsistent" means only the dual compliance test.⁷ Even if the City's view of the holding in that case is accurate, there is little reason to believe that Congress had in mind only the first test in Section 112 of the HMTA. Congress intended that Section 112 be capable of precluding both "a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation." This purpose requires preemptive results much wider than a voiding only of those State laws whose effects are either to drive persons into noncompliance with Federal requirements, or to penalize those persons that do comply.⁸

Another point supporting the DOT position on use of both tests to ascertain the occurrence of preemption under Section 112 arises from the purposes of Section 112(b). Under paragraph (b), preemption of a State requirement is waived if the State demonstrates to the Secretary that its requirement meets two additional tests: the State requirements must provide a level of safety at least equal to that provided by Federal requirements under the HMTA, and must not unduly burden commerce. The statutory history⁹ indicates that paragraph (b) waivers were thought likely to be used in emergency situations, although they are clearly not limited to emergencies, since a waiver continues in effect so long as the State requirement is effectively enforced and administered. It is difficult to see how a paragraph (b) waiver could be of significant use in an emergency situation unless that waiver gives the State requirement a clean bill of health under the HMTA. If the waiver applies only to the extent that a dual compliance problem exists, the possibility of preemption under the second test will continue to hinder necessary State action.

The effect of Section 112 depends heavily on the word "requirement" as well as on the word "inconsistent." Preemption cannot occur without the existence of a Federal "requirement" under the HMTA, which we construe to mean an

⁶ Letter from N.Y.C. Assistant Corporation Counsel to Office of Hazardous Materials Operations, October 21, 1977.

⁷ The Supreme Court has previously noted that many words have been used to describe the relationship between State and Federal law that results in statutory preemption, "inconsistent" being one of them. *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941). The Court itself seems to have used the word to refer to more than just the dual compliance test. *Jones*, at 526. In *Jones*, the Court was not construing a statutory use of the word "inconsistent" but rather used that term to address the relationship between an express preemption provision of the Fair Packaging and Labeling Act and a California requirement concerning display of weight of contents on packages of flour. The FPLA preemption provision only covered one section of the FPLA rather than the entire Act (unlike § 112 of the HMTA). The Court found preemption based on the purposes of the FPLA as a whole, after concluding that the narrower terms of the express preemption provision did not cause preemption. The Court expressed the latter conclusion by stating that the California requirement was not inconsistent with the FPLA express preemption provision. However, that provision was limited, rather than encompassing the full range of preemption that could occur under the FPLA.

⁸ S. Rept. 93-1192, 93rd Cong., 2nd Sess., 37-38 (1974).

⁹ *Id.*

obligation to act or to refrain from action. An HMTA requirement may completely regulate a given subject, or may represent an affirmative finding that only limited regulation is desirable. In either event, to determine whether preemption has occurred under Section 112 of the HMTA, it is necessary first to identify an HMTA requirement against which an identified State or local requirement can be evaluated for inconsistency.

The importance of an adequate identification of an HMTA requirement in evaluating a possibly inconsistent State or local law also follows from the language of Section 112(b). When an HMTA requirement cannot be adequately identified, a waiver of preemption for a State requirement may not be possible, since the first waiver criterion in Section 112(b) may not be met because the level of safety established by Federal requirements cannot be determined. Even if it is possible to grant a waiver for State requirements ostensibly preempted under unidentified Federal requirements, the value of such a waiver would be minimal, since it would never be clear whether the waiver would successfully survive subsequent amendments to the requirements of the Hazardous Materials Regulations.¹⁰ The point of an express statement of preemption such as Section 112 is to clarify respective Federal and State responsibilities. An adequate identification of preemptive Federal "requirements" is inherent in that purpose.

Once a Federal requirement under the HMTA has been identified, then the two tests for preemption stated at 49 CFR 107.209(c) are employed to determine whether preemption occurs. The first test concerning dual compliance is logically a subset of the second test, but it is stated separately because it is a convenient and relatively easily applied test. In fact, the inability of a member of the public to comply both with Federal and State requirements is a result of conflict between two requirements, the Federal requirement in itself being an explicit statement of Congressional purpose carrying specified penalties for noncompliance.

The Federal requirements which this proceeding must consider are to be found in regulations issued by the Secretary of Transportation to implement the HMTA (see Part II of this document). Since the general purpose of the HMTA is stated therein to be the improvement of the Secretary's regulatory and enforcement authority to protect the Nation against inherent risks in the transportation of hazardous materials, and the HMTA consists primarily of grants of discretionary authority to the Secretary, the "achievement and execution" of the HMTA occurs essentially through regulations issued by the Secretary. As a consequence an examination of a regulatory requirement issued under the HMTA must rely heavily on the regulatory objectives intended by issuance of the regulation in question. If a State and a Federal regulation can both be complied with, the second test will require an examination of the purposes of the Federal regulation in the context of the body of regulations in which it appears, as well as in the context of the HMTA itself.

It is our view that any preemption that may occur under the HMTA (at least to the extent that the Federal interest in issue concerns an imposition of obligations on members of the public) is described in Section 112. That section applies to "any requirement" in the HMTA or in regulations issued under the HMTA. To view Congress' use of the word "inconsistent" as limiting Section 112 preemption to that occurring under the dual compliance test is to restrict that section to an extremely limited function, not a result sanctioned either by the language of the section or by the legislative history.

II. SECTION 175.111 IS NOT INCONSISTENT WITH REQUIREMENTS CONTAINED IN THE TEXT OF THE HMTA

Express preemption under Section 112 of the HMTA occurs upon the existence of mutually inconsistent HMTA and State or local requirements.¹¹ Such requirements, or obligations to act or to refrain from action, exist both in the text of the HMTA and in regulations issued under the HMTA.

¹⁰ Although the HMTA, in § 112(b), provides that a waiver of preemption continues in effect so long as the local requirement for which waiver is given is effectively administered and enforced, a new regulatory requirement issued under the HMTA after the date the waiver occurs may cause preemption of the local requirement. The waiver cannot apply prospectively to regulatory requirements not in existence at the time it is granted.

¹¹ This discussion should not be confused with questions involving common carrier obligations and tariff restrictions. Such questions do not involve HMTA preemption of State or local transportation requirements.

The word "requirement" as used in Section 112 will most frequently concern requirements imposed by the Secretary, by regulation, on shippers, carriers, container manufacturers and others involved in the transportation of hazardous materials; otherwise it will concern requirements imposed by the HMTA on those persons who violate regulations issued under the HMTA by the Secretary. In either case, requirements of this kind imposed on members of the public require implementing regulations to exist, since without implementing regulations, the HMTA does not impose obligations on members of the public. Such requirements as the HMTA imposes that exist without implementing regulations are requirements on the Secretary and consequently are not pertinent to this proceeding.¹² As a result, it is in regulations issued under the HMTA that requirements must be found upon which this proceeding's interpretation can be based.

This view of HMTA preemption conforms to Section 114 of the HMTA which directs that actions taken under prior laws (such as 18 U.S.C. 834) continue to be valid while the DOT hazardous materials regulatory program is brought into conformity with the HMTA. Imposition of preemption-backed requirements on shippers and carriers as an immediate result of enactment of the HMTA would disrupt this phased transition from regulation under older statutes to regulation under the HMTA, which generally leaves the imposition of requirements to Secretarial discretion.

In view of this, it is clear that Section 175.111 is not inconsistent with any requirement contained in the text of the HMTA.

III. SECTION 175.111 IS NOT INCONSISTENT WITH REGULATIONS PRESENTLY IN FORCE UNDER THE HMTA

The DOT Hazardous Materials Regulations implement the HMTA by prescribing as obligations for shippers, carriers and other persons, the necessary conditions for highway transportation of hazardous materials. Compliance with the Hazardous Materials Regulations is necessary for transportation of hazardous materials by interstate highway carrier but does not relieve a shipper or highway carrier of its obligation to comply with State and local laws. State and local regulatory agencies obviously have and exercise transportation safety responsibilities, especially as regards traffic control and immediate reaction to emergency situations. Conditions not addressed under the HMTA may be properly regulated by State and local agencies within bounds set by other Federal laws.

A. *It is Possible to Comply With Both Section 175.111 and the DOT Hazardous Materials Regulations*

While it is true that compliance with Section 175.111 logically results in the absence of radioactive materials shipments in New York City and the consequent absence of radioactive materials transportation activities within the City to which the Hazardous Materials Regulations can apply, the proper test is whether compliance with Section 175.111 can trigger enforcement action under the HMTA, or vice-versa.¹³ Clearly, Section 175.111 does not require any action that could conceivably result in a violation of the DOT Hazardous Materials Regulations, and the fact of compliance with HMTA requirements cannot cause a violation of Section 175.111.

B. *Section 175.111 Does Not Stand as an Obstacle to the Accomplishment and Execution of Regulations Presently in Force Under the HMTA*

Essentially, four arguments are available to support AUI's assertion that Section 175.111 is inconsistent with regulations issued under the HMTA.

Argument (1): The Hazardous Materials Regulations authorize shipment of radioactive materials made in conformity with requirements therein. A complete ban that applies to most radioactive materials shipped by interstate carrier in compliance with those regulations frustrates that authorization.

This argument fails to identify adequately a requirement in the Hazardous Materials Regulations from which inconsistency may be deduced. To say that Section 175.111 addresses radio-active materials that are also regulated under the HMTA is not sufficient to establish inconsistency, since inconsistency is keyed to the existence of "requirements." Present requirements under the HMTA concern-

¹² See HMTA, § 105(c) for an example. The general purpose of the HMTA as stated in § 102 is "to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against the risks to life and property which are inherent in the transportation of hazardous materials in commerce. The exercise of most of that authority is discretionary rather than mandatory.

¹³ Cf. *Florida Lime and Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963).

ing radioactive materials carriage by highway do not circumscribe radioactive materials so as to control routes of movement which is the basic thrust of Section 175.111.¹⁴ Even assuming all HMTA regulations concerning radioactive materials may be treated as a single requirement, those regulations do not obligate any carrier to avoid certain locations.

Argument (2) : Section 175.111 is inconsistent with HMTA regulations concerning radioactive materials transportation. Those regulations generally preempt State and local regulations on that subject, in support of the regulatory scheme developed under the Atomic Energy Act of 1954.

The compatibility between the DOT Hazardous Materials Regulations and those under the Atomic Energy Act is intentional, reflecting a division of overlapping transportation authority between the Atomic Energy Act and transportation statutes such as 18 U.S.C. 834, which is addressed in a Memorandum of Understanding (MOU)¹⁵ between DOT and the old Atomic Energy Commission. One example of reliance on the Atomic Energy Act which occurs frequently in DOT regulations is reference to the Nuclear Regulatory Commission regarding qualification of Type B packagings. However, the basic difficulty with this argument is that the Atomic Energy Act cannot cause preemption under the HMTA.

Certainly, the regulatory scheme developed under the Atomic Energy Act was known and accommodated by the MOU and the regulations themselves, but neither the HMTA,¹⁶ the Hazardous Materials Regulations, nor the MOU reflect any special status for radioactive materials. The DOT regulations in fact treat radioactive materials in essentially the same fashion as other hazardous materials, except for the distinct techniques necessary to deal with radiation hazards instead of chemical or biological hazards. The MOU recognizes that the division of responsibilities for regulating the transportation of radioactive materials, as agreed by the signatory agencies, is "subject to their respective statutory authorities . . ." The agreement was entered at a time when DOT regulations were based on 18 U.S.C. 834, but reissuance of DOT regulations under the HMTA has not affected the agreement or the regulations themselves insofar as radioactive materials are concerned: the DOT regulations treat radioactive materials as one of a number of classes of materials with recognized transportation hazards. The fact that radioactive materials, rather than explosives, flammables, or some other class of hazardous materials, are the subject of certain DOT regulations does not carry with it special or distinctive preemptive effects.

Argument (3) : Section 175.111, by forbidding transportation of radioactive materials, is inconsistent with DOT regulations which also forbid transportation of certain materials or categories of materials, but which do not forbid the movement of radioactive materials.

An examination of the Hazardous Materials Table (49 CFR 101) reveals that some materials are intrinsically so dangerous that their transportation is completely forbidden. This argument concludes that, because radioactive materials have been thoroughly considered at 49 CFR 389 *et seq.* and are not forbidden from transportation, the City may not forbid their transportation. In essence, the City's choice of a forbidden material is said to be inconsistent with the forbidden materials identified under the HMTA.

Materials forbidden from transportation under the HMTA include, for example, unstable explosives and loaded firearms. In most cases, transportation is forbidden because the material in question behaves in an unpredictable manner. Unstable explosives may detonate and loaded firearms may discharge regardless of any practical packaging or handling precautions taken by shipper or carrier.

Radioactive materials, by comparison, are notably predictable in the radiation hazards they pose and can without question be shipped safely in the normal course of transportation. It would be extremely hard to support the assertion that radioactive materials, even materials with very high radiation levels, cannot be moved safely under any circumstances, given the excellent twenty-five year record

¹⁴ The Secretary of Transportation is specifically authorized to issue regulations governing routing in consultation and cooperation with the Interstate Commerce Commission.

¹⁵ Memorandum of Understanding (MOU) Between the U.S. D.O.T. and the U.S. A.E.C. for Regulation of Safety in the Transportation of Radioactive Materials Under the Jurisdiction of the D.O.T. and the A.E.C., March 22, 1973. This MOU is still effective despite the separation of the AEC into the Nuclear Regulatory Commission and the Energy Research and Development Administration, and the latter's incorporation into DOE.

¹⁶ Section 108 of the HMTA does directly concern the shipment of radioactive materials by passenger-carrying aircraft, but the section has not particular relevance to the proposition that regulations under the HMTA do not reflect an intention to preempt State and local requirements to the extent they might be preempted by action under the Atomic Energy Act of 1954.

of their commercial transportation. The City's assertion, however, is that Section 175.111 is necessary because of the population density¹⁷ of the City, not because the characteristics of radioactive materials render them absolutely unsuited to transportation. Consequently, Section 175.111 does not frustrate the purposes of identification under the HMTA of materials forbidden from transportation.

Argument (4) : Section 175.111 is inconsistent With 49 CFR 397.9.

The City has urged that Section 175.111 supports and advances the purposes of 49 CFR 397.9. This provision of the Federal Motor Carrier Safety Regulations is a requirement binding certain highway carriers of hazardous materials to avoid densely populated areas unless there is not any other practicable route, "practicable" being defined therein to exclude consideration of the carrier's operating convenience. The City urges that water carriage of AUI shipments is a "practicable" alternative.

The City's position essentially is that its dense population justifies the expense and inconvenience of moving radioactive materials by non-highway modes along routes outside the City, because the consequences of a major accident are too extreme to be tolerable, however remote the probability. The City has expressed concern with the effects of the Port Authority and the Triborough Authority's restrictions on use of the bridges which access the mainland from Long Island, which before enactment of Section 175.111 had the effect of funneling traffic in radioactive materials through Manhattan.

An opinion of the Department of Transportation General Counsel,¹⁸ issued in 1976, is attached as Appendix C. That opinion interprets 49 CFR 397.9 as not requiring a highway carrier to consider transshipment by a non-highway mode. The Federal Motor Carrier Safety Regulations have not been issued under the HMTA,¹⁹ and consequently any preemptive effects that 49 CFR 397.9 may have do not arise under the HMTA. Should that provision have the effect of preempting Section 175.111, the HMTA does not provide any basis for a waiver of preemption. For these reasons, this discussion will attempt no further elaboration of 49 CFR 397.9 beyond that contained in Appendix C.

However, the City's reliance on 49 CFR 397.9 reflects the fact that the City's "ban" considered in terms of its purposes does not differ analytically from a routing restriction. To assert the contrary is to assert that there is not any local jurisdiction whose characteristics would justify its total avoidance by hazardous materials highway carriers. Such an assumption is implicit in 49 CFR 397.9, which authorizes carriage through populous areas if there is not any other practicable alternative highway route. However, no such assumption appears in any of the regulations issued under the HMTA, since those particular regulations do not now include any routing requirements even though the HMTA authorizes the imposition of such requirements.

IV. CONCLUSION

There is not any identifiable requirement in the text of the HMTA or in regulations issued thereunder that provides a basis for a finding of inconsistency with Section 175.111.

Section 175.111 is most analogous to a routing requirement in terms of its purposes and effects. The lack of a routing requirement under the HMTA, which expressly authorizes such a requirement, means that existing regulations issued under the HMTA do not occasion inconsistency with Section 175.111. Although 49 CFR 397.9 is a routing requirement, it is not based on the HMTA and a finding regarding inconsistency under the HMTA cannot apply to that provision of the Motor Carrier Safety Regulations.

Even considering the HMTA Hazardous Materials Regulations generally, those regulations do not relieve carriers of their obligation to comply with local requirements such as Section 175.111. The fact that Section 175.111 and the Hazardous Materials Regulations both apply to radioactive materials carries no special preemptive significance, since radioactive materials are addressed in the Hazardous Materials Regulations as merely one of a number of classes of hazardous materials. Because Section 175.111 is not considered with whether it is possible under any conditions to carry radioactive materials safely by highway, it does not

¹⁷ Letter from N.Y.C. Assistant Corporation Counsel, n. 6, *supra*; Testimony of Dr. Leonard Solon, Director, Bureau for Radiation Control, Public Hearing on the Transportation of Radioactive Materials, November 10-11, 1977, Transcript at 20 *et seq.*

¹⁸ Letter from N.Y.C. Assistant Corporation Counsel, n. 6, *supra*.

¹⁹ See n. 5, *supra*.

conflict with identification under the Hazardous Materials Regulations of those materials for which transportation is entirely forbidden in U.S. commerce.

In considering the above, the MTB has decided to issue, within the next sixty days, an advance notice of proposed rulemaking, to aid in a decision as to whether some form of Federal routing requirement is needed.

In spite of the conclusion reached that Section 175.111 is not presently preempted by the HMTA, there are several aspects of that local requirement which concern the Materials Transportation Bureau.

(1) A basic concern is the inclusion of almost all radioactive materials shipped commercially within a single category in Section 175.111. All are subjected thereby to a near total prohibition in transportation. Justification for the prohibition relies on the remote possibility of a substantial release of high specific activity radioactive materials. Radioactive materials, like corrosives and other classes of hazardous materials, range over a wide spectrum of hazard levels, and the Federal regulatory scheme makes distinctions between levels of activity. The Federal scheme also distinguishes between the physical and chemical forms in which a given material may be shipped, which bears on the likelihood of the material being easily dispersed. These distinctions find no place in Section 175.111.

(2) Any attempt at evading the Section 175.111 prohibition will probably involve transportation in unplacarded motor vehicles, in violation of DOT requirements (evidence of noncompliance with Section 175.111 has not been raised in this proceeding).

(3) Section 175.111 is causing the diversion of radioactive materials shipments to avoid the City. Brookhaven has shipped by truck using a route including a journey by passenger ferry to Connecticut. Some of the truck shipments intended for air carriage from Kennedy International Airport are being diverted to other airports. One effect of this diversion of traffic from customary commercial routes may be the creation of situations uncommon to the places in which they occur, with the result that persons involved in the transportation network, and emergency response personnel, may be faced with unfamiliar circumstances, or with numbers of shipments that exceed their established handling abilities. A shift of traffic has obvious implications for both Federal and State enforcement programs.

(4) It may not be prudent for safety decisions of the far reaching effects of Section 175.111 to be made solely by local governments. It is unfair, and possibly not conducive to overall safety, to ask other locations to accept and handle additional commerce in materials which a jurisdiction such as New York City decides it will not accept. As is true in other areas of State and local activity, neighboring jurisdictions may find it necessary to reciprocate. A proliferation of local bans like Section 175.111 dealing with hazardous materials carriage will result in a disrupted national transportation network that is at best confusing, at worst chaotic, and neither condition advances transportation safety.

On the other hand, in the absence of Section 175.111 the number of shipments of high level radioactive materials through the City is likely to increase substantially. Brookhaven is a relatively small shipper of radioactive materials, since its activities are research oriented. Long Island Lighting Company (LILCO) expects, possibly within twelve years, to be operating three reactors at two site on Long Island for the commercial production of electric power. While Brookhaven usually makes six shipments of reactor wastes each year, the kind of activities LILCO is undertaking will result in a very substantial increase in such shipments. It is also clear that despite a reduction in the National effort to develop a plutonium-based fission technology, the United States will increasingly depend on nuclear fission for a substantial part of its energy needs.²⁰ The problem of establishing a suitable permanent radioactive waste disposal site may be solved as early as 1988,²¹ which may also result in an increase in the shipment of wastes since the existence of a permanent disposal site will facilitate the construction of new reactors.

The legal validity of Section 175.111 is still subject to serious doubt. This opinion dealt only with highway carriage, as raised by AUL. Air, rail and water carriage are more thoroughly imbued with a Federal interest and this opinion does not apply to transportation by those modes. New York City and any other

²⁰ As much as 20 percent of the electricity supply of the United States may be fission-generated by 1985. Executive Office of the President, The National Energy Plan 71 (April 29, 1977).

²¹ DOE, Report of Task Force for Review of Nuclear Waste Management 12 (February, 1978).

jurisdictions which have, or are contemplating similar ordinances, should also bear in mind the fact that Section 175.111 may be preempted by the Commerce Clause of the United States Constitution, or by the Atomic Energy Act of 1954 and regulations issued thereunder. In addition, we think it well established that the text of 49 CFR 397.9, contrary to the City's assumption, does not require a highway carrier to ship by water, for example, if transportation through the City is the only practicable highway route. Finally, whatever the ultimate legal fate of Section 175.111, such provisions may face a necessary future harmonization with rulemaking that results from the inquiry MTB intends to undertake.

L. D. SANTMAN,
Acting Director, Materials Transportation Bureau.

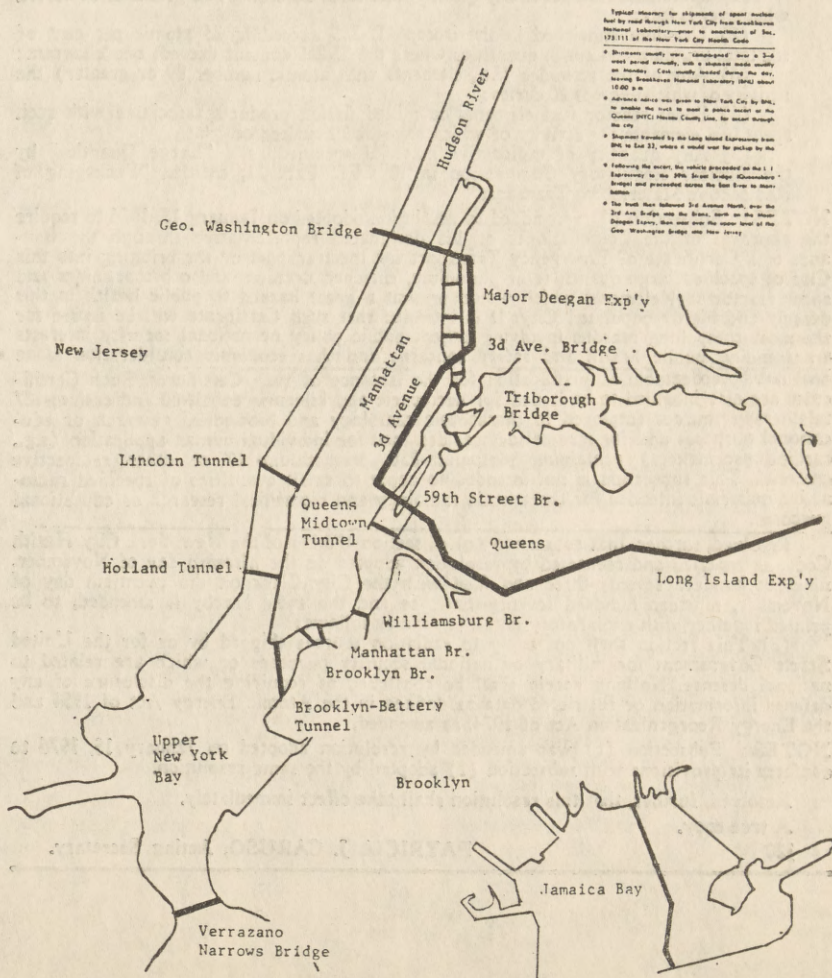
APPENDICES

A. Map showing route used by AUI's carrier prior to enactment of Section 175.111.

B. Text of Section 175.111.

C. DOT General Counsel's opinion interpreting 49 CFR 397.9.

APPENDIX A



HEALTH SERVICES ADMINISTRATION DEPARTMENT OF HEALTH

Resolutions Adopted

*Published in "The
City Record" Tuesday
Jan. 20, 1976*

AT A MEETING OF THE BOARD OF HEALTH OF THE DEPARTMENT OF Health held January 15, 1976, the following resolution was adopted:

Resolved, that section 175.111 of the New York City Health Code, as repealed and reenacted by resolution adopted on the fifteenth day of November, nineteen hundred seventy-three and filed with the City Clerk on the twentieth day of November, nineteen hundred seventy-three, be and the same hereby is amended by adding a new subsection (1) thereto, to follow subsection (k) thereof, to be printed together with explanatory notes, to read as follows:

(1) Notwithstanding the foregoing provisions of this section, a Certificate of Emergency Transport issued by the Commissioner or his designated representative shall be required for each shipment, to be transported through the City or brought into the City, of any of the following materials:

(1) Plutonium isotopes in any quantity and form exceeding two grams or 20 curies, whichever is less;

(2) Uranium enriched in the isotope U-235 exceeding 25 atomic per cent of the total uranium content in quantities where the U-235 content exceeds one kilogram;

(3) Any of the actinides (i.e., elements with atomic number 89 or greater) the activity of which exceeds 20 curies;

(4) Spent reactor fuel elements or mixed fission products associated with such spent fuel elements the activity of which exceeds 20 curies; or

(5) Any quantity of radioactive material specified as a "Large Quantity" by the Nuclear Regulatory Commission in 10 CFR Part 71, entitled "Packaging of Radioactive Material for Transport."

NOTES: Subsection (1) was added by resolution adopted on January 15, 1976 to require the approval of the Commissioner or his designated representative through the issuance of a Certificate of Emergency Transport for the transport or the bringing into this City of specified large quantities of plutonium, enriched uranium and other actinides and spent reactor fuel elements which would present a great hazard to public health in this densely and highly populated City. It is intended that such Certificate will be issued for the most compelling reasons involving urgent public policy or national security interests transcending public health and safety concerns and that economic consideration alone will not be acceptable as justification for the issuance of such Certificate. Such Certificates are also intended to be issued for hectocurie and kilocurie cobalt-60 and cesium-137 teletherapy sources employed in therapeutic radiology and biomedical research or educational purposes and for medical devices designed for individual human application (e.g., cardiac pacemakers) containing plutonium-238, promethium-147 or other radioactive material. This subsection is not intended to apply to small quantities of specified radioactive materials intended for therapeutic radiology and biomedical research or educational purposes.

Resolved, further, that subsection (c) of section 175.111 of the New York City Health Code, as repealed and reenacted by resolution adopted on the fifteenth day of November, nineteen hundred seventy-three and filed with the City Clerk on the twentieth day of November, nineteen hundred seventy-three, be and the same hereby is amended, to be printed together with explanatory notes, to read as follows:

(c) This section shall not apply to radiation sources shipped by or for the United States Government for military or national security purposes or which are related to national defense. Nothing herein shall be construed as requiring the disclosure of any defense information or restricted data as defined in the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974, as amended.

NOTES: Subsection (c) was amended by resolution adopted on January 15, 1976 to conform its provisions with subsection (1) adopted by the same resolution.

Resolved, further, that this resolution shall take effect immediately.

A true copy.

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PATRICIA J. CARUSO, Acting Secretary.

APPENDIX C

OFFICE OF THE SECRETARY OF TRANSPORTATION,
Washington, D.C., May 12, 1976.

PETER L. STRAUSS, Esq.,
General Counsel, Nuclear Regulatory Commission, Washington, D.C.

DEAR MR. STRAUSS: This is in response to your letter of March 16, 1976, requesting the Department of Transportation's (DOT) interpretation of 49 CFR §§ 397.3 and 397.9, two Federal Highway Administration (FHWA) regulations dealing with the safe transportation of hazardous materials in commerce. The regulations at issue are contained in 49 CFR Part 397—Transportation of Hazardous Materials; Driving and Parking Rules, and read as follows:

"§ 397.3 State and local laws, ordinances, and regulations.

"Every motor vehicle containing hazardous materials must be driven and parked in compliance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless they are at variance with specific regulations of the Department of Transportation which are applicable to the operation of that vehicle and which impose a more stringent obligation or restraint.

"§ 397.9 Routes.

"(a) unless there is no practicable alternative, a motor vehicle which contains hazardous materials must be operated over routes which do not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets, or alleys. Operating convenience is not a basis for determining whether it is practicable to operate a motor vehicle in accordance with this paragraph.

"(b) Before a motor carrier requires or permits a motor vehicle containing Class A or Class B explosives to be operated, he must prepare a written plan of a route that complies with the rules in paragraph (a) of this section for that vehicle and must furnish a copy of the written plan to the driver. However, the driver may prepare the written plan as agent for the motor carrier when the driver begins his trip at a location other than the carrier's terminal."

The issues raised by your letter concern the validity of three assertions.

1. The assertion that 49 CFR § 397.3 is intended to require compliance with local restrictions that are tantamount to a ban on the transportation of radioactive materials through or in the local jurisdiction.

In adopting § 397.3 on March 31, 1971, the Director of FHWA's Bureau of Motor Carrier Safety (BMCS) made the following statement:

". . . § 397.3 merely applies to vehicles transporting hazardous materials, a rule which has been in force for interstate carriers generally for many years (*see* 49 CFR § 392.3). No undue burdens appear to have resulted from requiring those same carriers to obey local and State laws. The only novelty in restating the rule in Part 397 is that it will now apply to intrastate movements of hazardous materials by interstate carriers. The claim that this action will impose new and unbearable obligations appears to be an overstatement. 36 FR 4874, March 13, 1971.¹

The full meaning of the statement that ". . . § 397.3 merely applies to vehicles transporting hazardous materials, a rule which has been in force . . . for many years (*see* 49 CFR § 392.2)" becomes clear when the relationship between Parts 392 and 397 is understood. These Parts both contain driving and parking rules applicable to motor carriers (common, contract, and private) who engage in interstate or foreign commerce. The rules in Part 392 are of a general nature and are to be complied with by motor carriers without regard to the property being transported. The rules in Part 397 are additional driving and parking rules considered necessary to ensure the safe transportation of hazardous materials by motor carriers. When hazardous materials are being transported a motor carrier must comply with the driving and parking rules of both Part 392 and Part 397.

Section 392.3, referred to in the above statement, has been redesignated § 392.2 and is, except for minor language differences, identical to 49 CFR § 397.3. The substance of present § 392.2 has been in existence (under various other section designations) since 1952. Whatever the section designation, it has always been embodied under a part entitled "Driving of Motor Vehicles" having the same applicability as present Part 92.

Although § 397.3 was not adopted until 1971, there did exist for many years prior to 1971 other regulations (Part 397 and its predecessor Part 197) relating to the driving and parking of motor vehicles which transport hazardous materials. The addition of § 397.3 was made, along with other changes to Part 397, in an effort further to reduce the level of risks involved in the movement of hazardous materials. By adopting § 397.3, the BMCS gave specific recognition, as the ICC had under § 392.2 with regard to general driving rules, to the limits of Federal Government authority and capability to establish rules governing all phases of the driving and parking operations of motor vehicles containing hazardous materials. As stated by the Director, BMCS, on March 13, 1971, "The only novelty in restating the rule [§ 392.2] in Part 397 is that it will now apply to intrastate movements of hazardous materials by interstate carriers."

Because Parts 392 and 397 both contain parking and driving rules and since § 397.3 is simply a restatement of § 392.2, differing only in that it has a limited application to motor carriers transporting hazardous materials, the scope of compliance with State and local laws, ordinances, and regulations that can be required under the language of § 397.3 cannot be broader than that required under § 392.2. An historical view of § 392.2 is therefore necessary.

The present form of § 392.2 was first seen (with minor language differences) as part of a major revision to the Interstate Commerce Commission's Motor Carrier Safety Regulations (49 CFR Parts 190-197) published on May 15, 1952 (17 FR 4422).¹ The predecessor of § 392.2 was contained in Part 192—Driving of Motor Vehicles:

§ 192.3 *Driving rules to be obeyed*

Every motor vehicle shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless such laws, ordinances, and regulations are at variance with specific regulations of this Commission which impose a greater affirmative obligation or restraint.

In the ICC Report (54 M.C.C. 337) setting forth the general basis and purpose of the May 15, 1952 amendments to their Motor Carrier Safety Regulations, the Commission stated the following with regard to amended Part 192:

A number of driving rules in the proposed revision of this part are objected to on the ground that they are in conflict with certain State laws, local ordinances, and police regulations. It is not our intention to occupy this field either exclusively or in any great detail so as to supersede or duplicate local driving regulations, and in only a very few compelling instances such as, driving while under the influence of alcoholic beverages, stopping of certain vehicles at railroad crossings, and placing of emergency signals for stopped or disabled vehicles, do we think it necessary to prescribe rules of this nature. We have reviewed the proposed revision with this in mind and with a few exceptions, such as indicated, those rules which would fall into the category of State or local driving regulations are not being adopted. Instead we are prescribing a rule which provides that motor vehicles shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which they are being operated, except to the extent that specific regulations of this Commission impose a greater affirmative obligation or restraint. 54 MCC 337, 348.

The rules that "fall into the category of State or local driving regulations" that "are not being adopted" number 22. In the proposal of January 3, 1951, they are identified as follows:

- § 2.03 Reckless driving forbidden.
- § 2.061 Speed must be reasonable and prudent.
- § 2.062 Legal limits must be observed.
- § 2.063 Reduced speeds during periods of darkness.
- § 2.065 Traffic signs, signals, markings or devices must be obeyed.
- § 2.11 Keep to right.
- § 2.121 Maintaining adequate space between vehicles.

¹ Prior to the 1952 amendment to Part 192 the only reference to complying with State and local driving laws was with regard to speed limits: "In no event shall a motor vehicle be driven in or through any State, legal subdivision thereof, the District of Columbia, or any area under the control of the Federal Government at a speed greater than that permitted by such State, legal subdivision thereof, District of Columbia, or the Federal Government."

When the 1952 amendment to Part 192 was proposed on January 3, 1951 (16 FR. 23), the then existing requirement of compliance with State and local speed limits was retained (see § 2.062 of January 3, 1951 proposal at 16 FR 26). When the proposals were finalized on May 15, 1952, § 192.3, as shown above, was adopted.

- § 2.122 Following too closely.
- § 2.133 No gear changes on crossings (precautions at railroad grade crossings).
- § 2.134 All drivers must ascertain that the course is clear (precautions at railroad grade crossings).
- § 2.143 All drivers must ascertain that the course is clear (precautions at drawbridges).
- § 2.15 Other users of highways must not be endangered.
- § 2.161 Vehicle must be in proper position for making turns.
- § 2.162 Extreme caution to be exercised in making turns.
- § 2.163 No "U" turn on curve or crest of grade.
- § 2.17 Special care in overtaking or passing.
- § 2.18 Overtaking must not be prevented by speeding up.
- § 2.20 Overtaking and passing buses.
- § 2.25 Not more than four road-lighting lamps to be illuminated.
- § 2.27 Minimum visibility requirement for road-lighting lamps.
- § 2.28 Spotlight must not blind other users of the highway.
- § 2.32 Lamp[s] or flag[s] on projecting load.

By deleting the above sections from the final rule the Commission did not intend that motor carriers be free from regulatory control with regard to that category of regulations. The deletion of those sections and the adoption of § 192.3 were effected in recognition of the interest State and local authorities have with regard to the driving and handling of motor vehicles within their jurisdictions. Requiring motor carriers to comply with State and local driving laws, ordinances, and regulations did no more than fill the gap in the Federal driving rules left by the deleted sections. As such, § 192.3 was intended to require compliance with State and local laws, ordinances, and regulations of the type addressed by the deleted sections identified above and did not require compliance with State and local laws, ordinances, and regulations relating to other matters.

This conclusion has been supported by both the ICC and the FHWA. I direct your attention to a March 14, 1955 opinion (L-25077) by the Director of ICC's Bureau of Motor Carriers. The opinion was given in response to a question of whether carriers subject to the Commission's Motor Carrier Safety Regulations may be required to comply with hours of service requirements of the State of New York while engaged in operations in interstate or foreign commerce. It appears from the opinion that New York was relying on § 192.3 as the basis for requiring the carrier to comply with the State law. The opinion reads in part as follows:

"You are correct in your assumption that section 192.3 was intended to require compliance with State and local driving rules of the kind contained in Part 192, unless a comparable Commission regulation imposes a greater affirmative obligation or restraint. You will note that Part 192 covers what might be called the mechanics of driving and handling of vehicles."

In a more recent interpretation issued on October 23, 1975 (40 FR 50671), the FHWA's Bureau of Motor Carrier Safety said the following with respect to the scope of § 392.2 (as before stated, § 192.3 is the predecessor of § 392.2):

"Since this rule is contained in Part 392 and not among the 'General' regulations in Part 390, the Bureau takes the position that it was intended to relate to State and local driving laws and regulations roughly comparable to those in Part 392, including safe loading, but not to include State laws and regulations relating to other matters."

Because 49 CFR § 392.2, cannot be read more broadly than to require compliance with State and local laws, ordinances, and regulations relating to the "mechanics of driving and handling of vehicles" of the type contained in Part 392, and since the scope of compliance with State and local laws, ordinances, and regulations that can be required under the language of § 397.3 cannot be broader more broadly than to require compliance with State and local laws, ordinances, and regulations relating to the "mechanics of driving and handling of vehicles" of the type contained in Part 397.

It is my opinion that local restrictions that are tantamount to a ban on the transportation of radioactive materials through or in the local jurisdiction cannot be considered to be related to the mechanics of driving and handling of vehicles of the type contained in Part 397 and, as such, are not required to be complied with under § 397.3.

2. The assertion that the "no practicable alternative" proviso of 49 CFR § 397.9 refers to alternate modes of transportation, as well as alternative motor vehicle routes.

The express language of § 397.9(a) speaks to this issue:

"Unless there is no practicable alternative, a motor vehicle . . . must be operated over routes which do not go through or near heavily populated areas, . . . or alleys. (Emphasis supplied.)"

Section 397.9(a) thus addresses itself to the behavior of motor vehicles and indicates that the operators of those vehicles are to choose less populous routes. To interpret § 397.9(a) to require a motor carrier to consider other than motor transportation as a "practicable alternative" would take that section beyond the scope of the particular statutory authority under which it was issued (18 U.S.C. 834 and 49 U.S.C. 304). That authority is limited to regulating for the safety in highway transportation.

Clearly the regulation could have gone so far as to prohibit the transportation of hazardous materials ". . . through or near heavily populated areas, . . . , or alleys." A motor carrier would then have the alternative of finding an alternate motor vehicle route or refraining from carrying the material. That the rulemaking authority was not exercised to that extent in § 397.9(a) is made clear by the language of the section.

It is therefore my opinion that the "no practicable alternative" proviso of 49 CFR § 397.9 is not intended to require a consideration of the practicability of transportation modes alternate to the motor vehicle.

3. The assertion that local restrictions on the transportation of radioactive materials through a metropolitan area, when tantamount to a ban, merely effectuate the policy embodied in 49 CFR § 397.9 of avoiding heavily populated areas when transporting hazardous materials.

The DOT recognizes that certain risks are associated with the transportation of hazardous materials and has, by regulation, taken steps to reduce those risks to a level that will ensure safety in transportation. Certain materials, regardless of packaging and handling precautions, present so great a risk to safety that they are prohibited from being transported in commerce.² However, § 397.9(a) addresses itself to those materials that are not prohibited from being transported. That section reflects the DOT's determination under its statutory responsibility (18 U.S.C. 834 and 49 U.S.C. 304) that the risks associated with those materials, when transported in accordance with DOT regulations, do not require a prohibition on their movement through populated areas by motor vehicles. This is consistent with my conclusion that § 397.9(a) does not require a consideration of the practicability of transportation modes alternate to the motor vehicle in order to avoid those areas.

Because § 397.9(a) does not go so far as prohibiting the motor transportation of hazardous materials ". . . through or near heavily populated areas, . . . , or alleys", I must conclude that a local restriction establishing such a prohibition cannot be said to effectuate the policy of that section.

Sincerely,

JOHN HART ELY.

1977 HAZARDOUS MATERIALS—TRAINING CONDUCTED BY THE TRANSPORTATION SAFETY INSTITUTE

Course	Participants	Number of classes	Number of students
Air transportation of hazardous materials	FAA safety inspectors	4	63
Motor carrier transportation of hazardous materials	FHWA investigators; State personnel	3	69
Air transportation of hazardous materials (industry)	Air carrier, air taxi, air shipper personnel	5	92
Intermodal transportation of hazardous materials	Industry and State personnel	2	37
Rail transportation of hazardous materials	FRA inspectors	1	16
Transportation of hazardous materials seminars	Industry and State personnel	9	748
Nonresident programed instruction (consumer commodities)	Industry and Government personnel		157
Emergency service workshop	State training officials and emergency services personnel	22	983
Total		46	2,165

² For examples of prohibited materials, see 49 CFR §§ 172.5, 173.21 and 173.51.

HAZARDOUS MATERIALS EDUCATIONAL PROGRAM

Sponsor and orientation	Sessions	Attendees
FAA:		
Aviation safety inspectors	198	1,584
Air carriers, freight forwarders, shippers, aircraft operators, other industry personnel	426	24,000
USCG:		
Industry	13	
Coast Guard personnel	18	360
FHWA: Industry and State personnel	1,044	64,320
FRA: States, rail carrier operating personnel, shippers	58	4,800
MTB:		
Industry, State and Federal personnel	11	1,676
Emergency services personnel	8	479
Trade associations, other industry meetings	5	236
Total	1,781	97,455

ATTACHMENT G

MATERIALS TRANSPORTATION BUREAU—HAZARDOUS MATERIALS AWARENESS SEMINARS IN 1977

	Date	Location	Attendees
Multimodal	Mar. 8-9	Anchorage, Alaska	150
	Mar. 11-12	Fairbanks, Alaska	100
	Sept. 28-29	San Antonio, Tex.	85
	Dec. 13-14	Newark, N.J.	225
	Dec. 15-16	do.	140
Government agencies	Apr. 19-21	Cape Kennedy, Fla. (National Aeronautics and Space Administration)	92
	May 17-19	Oakland, Calif. (General Services Administration)	600
	May 24-26	Sunnyvale, Calif. (National Aeronautics and Space Administration)	95
	June 20	Richmond, Va. (Defense Logistics Agency)	60
	July 26-27	Huntsville, Ala. (National Aeronautics and Space Administration)	95
	Sept. 14	Arlington, Va. (General Services Administration)	25
		Alexandria, Va. (Cameron Station, Headquarters U.S. Army DSLOG)	12
Emergency service	Jan. 25	Kensington, Md. (fire department)	37
	Feb. 1	Baltimore, Md. (fire academy)	80
	Feb. 3	do.	80
	Feb. 15	do.	80
	Feb. 17	do.	80
	March	Washington, D.C. (pesticide)	27
	Mar. 10	Anchorage, Alaska (fire department)	60
	Mar. 13	Prudhoe Bay, Alaska	35
Other organizations	March	Atlanta, Ga. (National Conference of Transportation Specialists)	15
	Do.	Burlington, Mass.	49
	Apr. 20	Olean, N.Y. (Enchanted Mountain Traffic Club)	65
	May 2	Lexington, Ky. (explosive seminar, Commonwealth of Kentucky Department of Mines and Minerals)	32
	May 11	Montreal, Canada (American Society of Cleaners & Solvents Lubrication Engineers)	75

[Whereupon, at 10:55 a.m., the hearing was recessed.]
 [The following information was referred to on p. 29:]

MATERIALS TRANSPORTATION BUREAU FIRST ANNUAL REGULATORY REVIEW AND
 DEVELOPMENT PLAN AND SCHEDULE OF RULEMAKING ACTIONS

INTRODUCTION

Consistent with and in furtherance of the President's goal to improve the Federal regulatory process as enunciated in Executive Order 12044 and reflected in the Secretary of Transportation's policies and procedures for the simplification, analysis and review of regulations (43 FR 9582), the Materials Transportation Bureau is implementing a number of organization changes to strengthen its rulemaking capability and establishing a systematic process for planning and scheduling its substantive rulemaking tasks. This document is a primary

output of that new process and represents the Bureau's first Annual Regulatory Review and Development Plan.

The Plan contains three major elements.

Statements of policy, regulatory review and development strategies and major regulatory objectives for achieving safety in hazardous materials and pipeline transportation, which express in broad terms the purpose of the Plan and the means for its implementation, based on the Bureau's current perceptions and available resources.

Identification of the overall scope and direction of the Bureau's regulatory programs, and a description of the factors the Bureau takes into consideration in setting rulemaking priorities.

A detailed one-year action schedule—to be revised and updated each following year—containing twenty major functional program areas and thirty-four specific rulemaking actions to be either initiated, carried forward or completed on or before March 31, 1979.

PURPOSE OF THE PLAN

Each year, in addition to its current backlog of more than three hundred petitions, the Bureau receives an average of about seventy new petitions and proposals for substantive rulemaking actions originating from carriers, shippers, pipeline operators, trade associations, State regulatory agencies, hazardous materials packaging and container manufacturers, the Department's own operating administrations, and interested members of the public.

The persistent tempo and public concern for hazardous materials and pipeline transportation—a tempo and concern which show no sign of abatement—testifies decidedly and decisively for the need of the Bureau to systematically plan and bring under more orderly control its rulemaking activities. Hard choices must be made. But without an overall plan, such choices will tend to be random, ad hoc, perhaps even arbitrary—with predictably inefficient and counterproductive results.

The crux of the Bureau's rulemaking task and therefore one of the basic purposes of the Plan is to provide a mechanism by which all the petitions and proposals the Bureau receives or has on file can be categorized to the major regulatory development and review program areas the Bureau believes most relevant to meeting national public safety needs in the movement of hazardous materials by the various forms of air, water, surface and pipeline transportation.

Because the resources of the Bureau are not sufficient to enable it to consider in detail and individually process, on a current basis, each of the petitions and proposals it receives, and because the Bureau believes it has a responsibility to respond in a timely and effective—although often only in a summary—fashion to all petitions and proposals, the Plan serves as a means for MTB management to identify organizational strengths and weaknesses in terms of what the Bureau believes can and cannot be done. At the same time, the Plan represents a broad statement of objectives to be carried out by all levels of rulemaking activities in the Bureau—including complementary research and development projects—all of which serve to guide the allocation of its energies and resources.

The Plan is also intended to provide a set of objectives and regulatory development priorities useful to private organizations in devising and executing their own safety programs dealing with hazardous materials and pipeline transportation. Because the Plan is based on a comprehensive review and priority rating of all outstanding rulemaking petitions, and because no significant rulemaking activity is expected to be undertaken with respect to petitions not listed in the Plan for scheduled action, the public and all concerned parties will be in a better position to assess what the Bureau perceives to be the major, overall national safety issues involving hazardous materials transportation; and how and in what manner the Bureau is attempting to address and resolve these issues. Moreover, by including and making publically available an indication of the Bureau's current short-term rulemaking priorities—the reasonableness and appropriateness of which are believed to be well-grounded—the Plan is also intended to provide a basis for a more productive exchange and orderly development of information that will serve to better guide the Bureau's setting and adjusting of long-range rulemaking priorities, objectives and policies.

The current long-term and more fundamental aspects of the Bureau's planning and priority system for the review and development of regulations are as follows:

Effective, orderly and rapid follow-through and completion of rulemaking actions selected and scheduled for action.—Once a rulemaking action is placed in

the Schedule, the completion or the programmed resolution of that action through all phases of the rulemaking process—ANPRM, NPRM, FINAL RULE—takes precedent on the resources of the Bureau, and over all new candidates for rulemaking that might otherwise qualify to appear in each succeeding Annual Schedule. This does not mean that the Plan is so inflexible and rigid as to prevent the Bureau from adjusting to extraordinary or minor changes. The Annual Schedule, however, is based on a realistic assessment of the Bureau's resources and represents its best judgment concerning those rulemaking actions which can make the greatest contribution to enhancing the public safety in hazardous materials and pipeline transportation. In the short term, these resources and the Bureau's commitments and priorities are clearly going to be difficult to change or alter.

Planning as a continuous, interactive function of the Bureau's mission responsibilities.—The Annual Schedule cannot be viewed or treated as an isolated document. It is part of an internal management process that relates to other functional responsibilities of the Bureau, such as its compliance and enforcement programs, its hazardous information analysis and dissemination activities, as well as its administrative and budgetary functions and year-to-year changes in available personnel and funding resources. This Regulatory Review and Development Plan will influence and in turn be influenced by these other functional activities. The Annual Schedule portion of the Plan, however, is also part of a process that involves an understanding and an appreciation of the forces which affect and determine the pattern and modal characteristics of hazardous materials and pipeline transportation, and the concerns of those who are either directly involved or subject to the risks associated with the transportation of hazardous materials. The Bureau will continue to build its capabilities to understand and monitor those factors which have such a large impact on the scope and content of its rulemaking actions. In time the Bureau expects to be in a position to move to a Regulatory Review and Development Plan having a longer time frame—even though it is not certain of the usefulness of such long-range plans, given that the very nature of the rulemaking process is not such as to predict or predetermine end results; and given the existence of a society characterized by rapid technological and socio-economic change.

The development and implementation of a phased program to convert technical, specification-oriented standards to performance standards, especially in the area of packaging and related plastic container regulations.—Performance standards establishing specified and adequate levels of public safety are already embodied in many of the Bureau's regulations pertaining to pipelines. A fundamental objective of the Bureau is to extend such standards to as many other areas under its regulatory authority as possible. This preference is based on the belief that performance standards provide greater freedom and more incentive to the regulated public to search at their own initiative for less costly approaches to either maintaining the status quo or enhancing the current levels of public safety afforded by technical standards. It is generally conceded that technical standards provide little flexibility, become locked into current state of the art technologies, and are dependent on the engineering expertise and resources available to the Bureau at any one point in time.

Greater reliance on and coordination of the technical expertise of the operating administrations in the development and completion of hazardous materials rulemaking actions.—In order to accomplish this goal in the short and intermediate time frame, the Bureau intends to strengthen the input and improve the coordination of the technical expertise available to the operating administrations in the Bureau's regulatory process, especially as it relates to the question of keeping pace with new technological developments for improving safety in the transportation of hazardous materials by the various modes. Although the Bureau has co-responsibility with the operating administrations in the formulation and issuance of hazardous materials regulations pertaining to a single mode of transportation, the Bureau also has the responsibility to review the intermodal implications and impacts associated with each individual rulemaking action. This Plan is therefore based on the assumption that the operating administrations can and will play a larger role in the Bureau's hazardous materials rulemaking activities. The Bureau intends to accomplish this in two ways: first, a closer review and scrutiny of incoming petitions to determine their adequacy and overall merit. Secondly, an annual review and consolidation of all outstanding petitions for rulemaking will be instituted, leading perhaps eventually to a joint government/industry/public conference to discuss which petitions may be revised, expanded, rejected or deferred in terms of a later notice of proposed rulemaking.

ANNUAL SCHEDULE STRUCTURE

The Annual Schedule is divided into two major sections. Section I pertains to rulemaking priorities with respect to the safe transportation of hazardous materials by vehicle. Section II pertains to rulemaking priorities for pipeline transportation. The rulemaking actions associated with hazardous materials and pipeline transportation are sufficiently dissimilar as to warrant separate identification and treatment.

Each Section is further subdivided into the two broad categories of (a) Public Safety and (b) Regulatory Efficiency. Under each category the Bureau has identified major program areas which define the scope and direction of the specific rulemaking actions that will be pursued in the coming year.

Under Section I—hazardous materials transportation—twenty-four rulemaking actions are contemplated; with ten occurring under Section II—pipeline transportation. In one sense, the proposed regulatory actions represent a modest planning effort, accounting for about only 31% of the substantive petitions the Bureau annually receives, and constituting only about 7% of its present backlog and inventory of petitions for rulemaking. In another, more pragmatic sense, however, the Plan for several reasons is ambitious. It entails a significant public commitment by the Bureau to follow through and complete in an orderly fashion a definite course of action. It represents a real attempt to rationalize and bring under systematic control an important—if indeed not the most important—function of the Bureau. And, it taxes the Bureau close to the limit of its current resources to produce well-conceived rulemaking actions that are intelligible in both form and substance and beneficial to the public safety.

CRITERIA USED IN SETTING RULEMAKING PRIORITIES

Apart from statutory mandates, or Executive direction calling for the Bureau to address a specific public safety issue involving pipelines or other hazardous materials transportation, rulemaking priorities in the Bureau are determined at two levels:

Priorities Among and Within Major Safety Program Areas.

Priorities Among and Within Major Regulatory Efficiency Program Areas.

Although this priority system has the appearance of being complex the complexity is more apparent than real.

Priorities Among Major Safety Program Areas.—Examples of major safety program areas that have been identified by the Bureau for purposes of current central regulatory policy development and management control are: Container Tank Car Safety and Integrity; Rail Tank Car Safety and Integrity; Liquid Natural Gas (LNG) Pipeline Safety. Major safety programs are designed to focus Bureau management attention and channel the Bureau's energies and resources to those areas that deserve priority treatment in terms of overall national safety issues in hazardous materials and pipeline transportation. The complete current ordering of the major safety programs for hazardous materials and pipeline transportation is as follows:

Hazardous materials transportation

Cargo Tank Safety and Integrity.
 Tank Car Safety and Integrity.
 Hazardous Materials Emergency Response/Communications.
 Radioactive Materials Transportation.
 Hazardous Materials Classification.
 Portable Tank Safety and Integrity.
 Modal Operations Safety (Rail/Highway/Water/Air).
 Packaging Safety and Integrity.
 Miscellaneous Safety Concerns.

Pipeline transportation

LNG Safety.
 Highly Volatile Liquids Pipeline Safety.
 Plastic Pipe Safety.
 Pipeline Welding.
 Arctic Pipeline Safety.
 Offshore Pipeline Systems.
 Petroleum Gas Pipeline Systems.
 Miscellaneous Safety Concerns.

Current priorities among these major safety program areas have been determined—and future adjustments in the priority ordering will be determined—on the basis of weighing the following two fundamental considerations listed in order of importance:

The current likelihood and frequency of accidents occurring in the subject area described by the major program and the magnitude of experienced and potential loss to human life, health and property such an accident could entail, in a worse case scenario.

The extent to which a major safety program area is complemented by major program areas designed to address regulatory efficiency.

From this standpoint, it is a fairly straight-forward task to determine priorities among the identified major program safety areas for hazardous materials and pipeline transportation.

For example, the top two priority program areas for hazardous materials transportation have been determined by the Bureau to be Cargo Tank Safety and Tank Car (Rail) Safety—with Cargo Tank Safety having first priority. Both of these program areas have top rulemaking priority because of the high accident rates cargo tank vehicles and railroad tank cars have been experiencing, and the high number of fatalities, injuries and property losses that are involved with these accidents (relative to the other major safety program areas). But currently Cargo Tank Safety has priority over Tank Car Safety because the Bureau has recently completed a major rulemaking action designed to significantly improve Tank Car Safety—which is expected to appreciably reduce both the severity and the frequency of rail tank car accidents.

As a logical corollary of this system of assigning priorities, rulemaking actions which are designed to enhance emergency response capabilities also assume high priority (included with the emergency response program are also regulatory actions which are designed to strengthen the communication of hazardous materials information in pre- and post-accident environments; thus, rulemaking actions that cover shipping paper, labeling and marking requirements appear under this major program).

Next in order of priority is the transportation of radioactive materials—which entails relatively minor accident frequency rates, but does carry a high potential for serious impacts in a worse case accident environment.

The same considerations were also employed in defining and rank ordering major program areas for pipeline safety. Currently, LNG safety has top priority because, although the likelihood and frequency of LNG accidents is small, the magnitude of potential loss to human life, health and property calls for prompt regulatory action with respect to LNG facility siting, operation and maintenance.

The Hazardous Materials Classification Program is an instance in which work in a particular safety program area will yield complementary benefits in one of the major program areas under Regulatory Efficiency—in terms of the simplification and consolidation of regulations; or from the standpoint of being responsive to the need for technological innovation and the facilitation of transportation. Similar cross-benefit potential can be seen elsewhere in the priority standing of the other major program areas in hazardous materials transportation.

Priorities Within "Major Program Areas".—All petitions for rulemaking received from the public and proposals from other government agencies, including the Department's own operating administrations and all such petitions and proposals from the past that are on file in the Bureau are assigned to the major program that most appropriately describes the area the petition or proposal seeks to address; and where necessary, they are also cross-referenced to other major program areas that may be affected. Each individual petition is then evaluated and given a priority rating on the basis of whether or not it meets the following criteria.

REGULATORY PROPOSAL PRIORITY RATING CRITERIA

Priority (A): *Major safety issue*—a revision to the regulations which would result in an immediate and substantial improvement in public safety, or result in a substantial abatement of an existing and continuing hazardous situation.

Priority (B): *Safety problem or safety improvement*—a revision to the regulations which would eliminate within a projected period of time a potential or an existing and continuing hazardous condition that is not as potentially disastrous as the type situation described in Priority (A). (Example: Hazardous Materials Incident reports may indicate safety problems with containers used in the shipment of a specific hazardous material; and this problem is resolved via the

rulemaking process by prohibiting use of the container for that particular material). For rulemaking activities that address less than major safety issues requiring fairly immediate corrective action it frequently is possible or even necessary to phase in the implementation of that action over a period of time to lessen the potentially disruptive and uneconomic impacts which a more rapid regulatory implementation schedule would entail.

Priority (C): *Exemption elimination*—a revision to the regulations which would incorporate the provisions of an exemption (to the current regulations), proven to have a satisfactory safety performance record based on actual shipping experience. (*Example*: Exemptions have been issued to authorize the use of new openhead plastic drums for paste or dry hazardous materials; and based on safety performance records, new regulatory standards have been promulgated.)

Priority (D): *Regulatory adjustment (such as in response to new technology)*—a revision to the regulations for the purpose of including technological improvements or more economic transportation alternatives not presently or previously authorized. (*Example*: A new grade of steel pipe has been developed; with current regulatory standards being amended to permit its future use.)

Priority (E): *Minor regulatory issues (limited significance or impact)*—a revision to the regulations for the purpose of clarifying a provision, but not changing its intent or meaning. (*Example*: Editorial changes, including misspelled words, references to an incorrect section, or the addition or removal of punctuation marks, elimination of jargon, etc.)

Individual petitions or proposals for rulemaking actions that have a Priority A or B rating—and therefore are clearly directed to addressing and solving a safety issue—have top priority over other proposals, such as those which are directed to incorporating into the Bureau's regulations new technological standards even though the new standards have a degree of identifiable safety benefit. The Bureau recognizes that one of the major driving forces behind technological innovation is economics. But in weighing and balancing economic considerations against safety issues, the Bureau's primary concern must be with safety. This is not to say that economic considerations involving the relative costs and benefits of rulemaking actions involving safety issues, or the cost effectiveness of alternative approaches to address those safety issues, are ignored or taken lightly in the Bureau's rulemaking process. This would be contrary not only to the policy of the Bureau but the policies of the Department and the Administration as well. Economic impacts are, therefore, a definite consideration that shapes the scope and content of rulemaking activities directed to safety issues. At the same time, however, it should not be supposed that the Bureau's Annual Schedule is designed to disregard technological or economic innovations or to permanently and consistently relegate them to the category of secondary or minor consideration in its system of priorities. Such matters are an express concern within the major regulatory efficiency program areas part of the Plan.

PRIORITIES AMONG MAJOR REGULATORY EFFICIENCY PROGRAM AREAS

The Bureau has defined three major regulatory review and development areas designed to improve regulatory efficiency. The considerations applicable to the ranking of these areas are in harmony with and in furtherance of the President's goal to the Federal regulatory process and the Secretary's policies and procedures for reducing the burdens and complexities of regulations. The priority ordering of these major program areas is as follows:

REGULATORY EFFICIENCY

Simplification/Consolidation/Elimination of Regulations.

Technological Innovation/Facilitation of Transportation.

Minor Regulatory Changes/Terminations.

It should be noted that one of these program areas—Technological Innovation and Facilitation of Transportation—has as one of its objectives the processing of rulemaking petitions or proposals which would result in significant reductions in the costs of transportation without compromising public safety—or if possible with accompanying improvement in public safety.

These program areas will also accommodate rulemaking actions which the Bureau intends to terminate, either because the magnitude of the safety problems

are found to be less than anticipated, or because the economic impact of the proposed rule was found to significantly outweigh the anticipated safety benefits, or because the Bureau was unable to adequately document the nature and the extent of the technological/economic improvement sought. This year, the Bureau plans to withdraw three such open docket rulemaking actions, which are listed in Sections I and II of the Annual Schedule covering hazardous materials and pipeline transportation.

Other factors considered in setting the priority given to an individual rulemaking petition includes its "program fit" characteristics—that is, the extent to which the proposal or petition complements other rulemaking petitions proposed or already underway—and the internal engineering soundness and feasibility of a proposal or petition, together with the extent and comprehensiveness of the data submitted to support it.

It is on the basis of this system of assigning priorities that the scope and content of the Bureau's Annual Schedule of Rulemaking Activities for hazardous materials transportation and pipeline safety have been determined.

TARGETS AND IMPLEMENTATION SCHEDULE

The first and indispensable condition for successful planning in the context of the Bureau's rulemaking activities is confidence on the part of all concerned in the seriousness of the Bureau's intentions as stated in the Annual Schedule. If it is thought that the Bureau may, after all, not be in earnest, that its "production" targets are little more than rhetorical flourishes or maximized hopes which will readily be foregone or vanish as soon as circumstances demonstrate that there is going to be some difficulty in achieving them, the Annual Schedule would become meaningless. It is for these reasons, and also because the very nature of the rulemaking process entails a large degree of uncertainty, that Sections I and II of the Annual Schedule contain only the anticipated rulemaking actions that the Bureau fully expects to produce and publish in the Federal Register during the forthcoming year. Actual publication dates may be advanced or retarded slightly. Through experience and a review of its performance in the months and years ahead, the Bureau hopes to avoid any major variation.

SECTION I—MATERIALS TRANSPORTATION BUREAU RULEMAKING SCHEDULE

I. Mission Goal: Public Health/Safety-Hazardous Materials Transportation

A. MAJOR PROGRAM AREAS: PUBLIC SAFETY

Cargo tank safety/integrity

Docket HM-115: Proposed standards and operating procedures for a new DOT tank truck for the transportation of cryogenic liquids—*NPRM*, November 1978.

Docket HM-110: Proposed standards to establish conditions under which repair and maintenance may be performed on motor vehicles transporting hazardous materials—*Final Rule*, July 1978.

Docket HM-136: Proposed standards specifying the location of a manhole assembly on a cargo tank, and authorization of attachment of certification plates to an integral supporting structure of certain cargo tanks—*Final Rule*, August 1978.

Tank car safety/integrity

Docket HM-144: (Reconsideration of) Consideration of possible changes in the current four-year schedule to retrofit DOT specification tank cars with safety devices—*NPRM*, May 1978.

Project 264-78: Consideration of possible changes to current safety performance standards for DOT specification 105 tank cars—*NPRM*, July 1978.

Hazardous materials emergency response/communications

Project 266-78: Standards for incorporating shipping descriptions and serial numbers from United Nations Regulations covering the transportation of dangerous goods—*NPRM*, December 1978.

Project 259-78: Standards to require shipping papers, covering hazardous materials to be made available by train crew to emergency response personnel—*NPRM*, November 1978.

Project 267-78: Standards to require labeling of excepted radioactive materials packages and notation on shipping papers regarding losses of radioactive shipments—*NPRM*, December 1978.

Radioactive materials

Docket 152: Revision of certain sections of Part 175 (49 CFR) which will reduce the exposure of passengers to radioactive materials carried aboard aircraft—*Final Rule*, January 1979.

Project 269-78: Consideration of an administrative ruling as applied to transportation routing of radioactive materials on grounds of preemption—*ANPRM*, July 1978.

Project 263-78: Consideration of standards and methods to reduce radiation exposure levels to transportation workers—*NPRM*, March 1979.

Classification

Project 260-78: New standards and procedures for the transportation of hazardous waste materials, in conjunction with the Environmental Protection Administration—*NPRM*, June 1978.

Docket HM-143: New standards for the definition, and transportation of, blasting agents—*Final Rule*, September 1978.

Docket HM-159: Proposed standards to add the names of materials to the Hazardous Materials Tables that are known to be too hazardous to be permitted in commercial transportation—*NPRM*, February 1979.

Docket HM-160: Classification of asbestos as a hazardous material and standards to control asbestos emissions during transportation—*Final Rule*, August 1978.

Docket HM-118: New standards for classifying a material as a flammable solid—*NPRM*, March 1979.

Project 268-78: New standards for establishing appropriate shipping descriptions and hazard classification for many detonators which are currently used in commercial service—*NPRM*, June 1978.

Portable tank safety/integrity

Project 193-72: Standards for new specifications for intermodal portable tanks and procedures for the use of these portable tanks for certain hazardous materials—*NPRM*, August 1978.

Modal operations (rail/highway/water/air)

Project 265-78: Standards for the safe operation of aircraft having certain hazardous materials aboard—*NPRM*, November 1978.

B. MAJOR PROGRAM AREAS: REGULATORY EFFICIENCY

Simplification/consolidation/elimination of regulations

Project 261-78: Simplification and recodification of the existing operating procedures for transportation of hazardous materials by motor vehicles as prescribed in Part 177 (49 CFR)—*NPRM*, March 1979.

Project 262-78: Consolidation, simplification and recodification of the existing requirements applicable to the transportation of radioactive materials—*NPRM*, September 1978.

Technological innovation/facilitation of transportation

Project 258-77: To allow the use of the metric system of measurements in place of the present United States liquid measure and the avoirdupois weight measurement—*NPRM*, June 1978.

Minor regulatory changes/terminations

Docket HM-139: Incorporation of provisions for selected exemption applications or existing exemptions and incorporation of miscellaneous minor changes based on petition requests—*NPRM*—every two months.

Docket HM-141: Withdrawal of Advance Notice of proposed rulemakings on color standards to be applied to compressed gas cylinders as a safety measure—*Withdrawal*, September, 1978.

SECTION II—MATERIALS TRANSPORTATION BUREAU RULEMAKING SCHEDULE

II. Mission Goal: Public Health/Safety-Pipeline Transportation

A. MAJOR PROGRAM AREAS: PUBLIC SAFETY

Liquid natural gas (LNG) safety

Docket OPSO-46: New comprehensive standards would be proposed for the siting, design, construction, operation, and maintenance of LNG facilities—*NPRM* (siting and design); December 1978; *NPRM* (construction, operation and maintenance, March 1979.

Highly volatile liquids pipeline safety

Project 173-7: Standards would be proposed with respect to the spacing of valves and other devices so as to minimize the amount of highly volatile liquids such as liquid petroleum gas (LPG)—that can be spilled and thereafter able to spread into populated areas—*NPRM*, August 1978.

Project 82-4L: Standards on testing or operating requirements would be proposed to reduce pipeline failure rates in pipelines carrying highly volatile liquids (e.g., LPG/NH₃)—*NPRM*, August 1978.

Project 175-7: New criteria would be proposed to govern a carrier's plans for preventing and handling emergencies for pipelines carrying highly volatile liquids—*NPRM*, June 1978.

Plastic pipe safety

Project 178-8: Standards involving joining procedures, personnel training or field tests would be proposed to ensure the integrity of plastic pipe joints—*NPRM*, July 1978.

B. MAJOR PROGRAM AREAS: REGULATORY EFFICIENCY

Simplification/consolidation/elimination of regulations

Project 85-5: Present reporting forms would be revised to provide additional and more appropriate information about gas safety problems, and to require reports from certain systems not now covered—*NPRM*, June 1978.

Technical innovation/facilitation of transportation

Project 176-7: Changes would be proposed to current cathodic protection requirements to alleviate compliance burdens—*NPRM*, October 1978.

Project 77-10: The manufacturing and design requirements for steel pipes (including grade X-70) in the 1977 editions of API 5LX and API 5LS would be incorporated by reference.—*FINAL RULE*, June 1978.

Minor regulatory changes/terminations

Docket OPS-31: Notice of proposed rulemaking to redefine the term "gathering line" would be withdrawn—*Withdrawal*, June, 1978.

Docket OPS-29: Advance Notice of proposed rulemaking on use of telemetry for pressure or flow measurements to warn of system failure would be withdrawn—*Withdrawal*, June, 1978.

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