

DEPARTMENT OF TRANSPORTATION**Research and Special Programs Administration****49 CFR Part 177**

[Docket No. HM-203 Notice No. 88-3]

Highway Routing Standards for Hazardous Materials**AGENCY:** Research and Special Programs Administration (RSPA), DOT.**ACTION:** Advance Notice of Proposed Rulemaking and Notice of Public Hearing.

SUMMARY: This Notice invites public comment and announces a public hearing concerning the possible need to establish routing criteria, requirements, and methodologies for analyzing alternative routes for the highway transportation of non-radioactive hazardous materials. This inquiry is intended to assist RSPA in deciding what Federal regulatory action, if any, should be undertaken to improve the transportation safety of non-radioactive hazardous materials through highway routing requirements.

DATES: Comments. Comments must be submitted on or before October 11, 1988.

Public Hearings. Public hearings will be held on June 14, 1988, from 9:30 a.m. to 5:00 p.m., in Sacramento, California and on September 15, 1988, 9:30 a.m. to 5:00 p.m., in Washington, DC. Hearings may close earlier than 5:00 p.m. upon presentation of oral comments from all persons desiring to comment.

ADDRESSES: Comments. Written comments should be submitted to the Dockets Unit (DHM-30), Research and Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590. Comments should identify the docket and notice number and should be submitted in five copies. Persons wishing to receive confirmation of the receipt of their comments should include a self-addressed stamped postcard. The Dockets Unit is located in Room 8426 of the Nassif Building, 400 Seventh Street SW., Washington, DC 20590. Public dockets may be reviewed between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, except holidays.

Public hearings. The public hearings will be held at the following locations:

- (1) June 14, 1988—Holiday Inn—Capital Plaza, 300 J Street, Sacramento, California 95814. (Telephone: (916) 446-0100)
- (2) September 15, 1988—U.S. Department of Transportation, FAA Auditorium, Third Floor, 800

Independence Avenue SW.,
Washington, DC 20590

Any person wishing to present an oral statement at the public hearings should notify the Dockets Unit, by telephone or in writing, at least two days in advance of the hearing date. Each request must identify the speaker; organization represented, if any; daytime telephone number; and the anticipated length of the presentation, not to exceed ten minutes. Written text of oral statements should be presented to the hearing officer prior to the oral presentation.

FOR FURTHER INFORMATION CONTACT: Joseph Nalevanko, Policy Development and Information Systems Division, (202) 366-4484, or Lee Jackson, Standards Division, (202) 366-4488, Office of Hazardous Materials Transportation, RSPA, Washington, DC 20590.

SUPPLEMENTARY INFORMATION:**Background**

As demonstrated by its recent legislative proposal (H.R. 4069), the Department is concerned about the adequacy of present legal requirements concerning the routing of non-radioactive hazardous materials. While Congress explores various legislative improvements, the Department is undertaking an exhaustive consideration of possible regulatory requirements for the routing of non-radioactive materials.

The Hazardous Materials Transportation Act (HMTA: Pub. L. 93-633) (49 App. U.S.C. 1801 *et seq.*) is the basic Federal legislation which addresses the safe transportation of hazardous materials. Under the HMTA, DOT has the authority to regulate, among other things, the routing of hazardous materials (see: 49 App. U.S.C. 1804). The Department can exercise this authority in a variety of ways. It can establish specific routing criteria, such as criteria which require avoidance of highways traversing heavily populated areas or selection of routes least likely to result in the release of a hazardous material. The Department can also establish specific procedural requirements for routing hazardous materials, such as a requirement that routing decisions be based on documentable risk analysis methodology or a requirement that parties affected by routing decisions be included in the decision-making process.

The purpose of this rulemaking is to consider the transportation safety aspects of the highway routing of non-radioactive materials. This will include consideration of routing decisions now being made by carriers and shippers and State and local governments and the

methods by which those decisions are made. This rulemaking will also consider the effects, particularly in terms of safety, of existing and possible Federal, State, and local routing actions, including the effects of actions by one State or locality on other jurisdictions.

Previous Routing Regulatory Activity

The Department has previously exercised its routing authority under the HMTA relative to the transportation of radioactive materials by highway under Docket HM-164 (46 FR 5298). Due to the several years of successful routing experience gained in this area, it will be useful to describe this rulemaking in some detail.

As a result of Docket HM-164, § 177.825 of the Hazardous Materials Regulations (HMR) was promulgated and requires that motor carriers, in selecting routes for transporting placarded radioactive materials, consider information such as accident rates, transit time, population density, time of day, and day of week during which transportation will occur.

Additionally, for highway route-controlled quantity (HRCQ) shipments of radioactive materials (e.g., spent nuclear fuel), motor carriers must use "preferred routes." A preferred route is either (1) an Interstate System highway for which an alternative route has not been designated by a State routing agency, or (2) an alternative route designated by a State routing agency in accordance with DOT guidelines or an equivalent routing analysis (see § 171.8, "State Designated Route"). Motor carriers of HRCQ shipments must select preferred routes which minimize transit time for shipments, except that an Interstate System bypass or beltway around a city must be used when available. During the rulemaking process, DOT addressed the risks of using the limited access Interstate System highways versus secondary highway systems for the transportation of radioactive materials. Based on available risk assessments, and the extensive comments received in response to the rulemaking, DOT concluded that the use of Interstate System highways generally would ensure the safe routing of HRCQ shipments of radioactive materials.

In Docket HM-164, DOT recognized the significant concerns and interests that State, regional and local governments have in the highway routing of radioactive materials and the important role which their actions and knowledge of local conditions can have in reaching effective routing decisions. Accordingly, 49 CFR 177.825(b) provides

that a State routing agency may designate an alternative route in place of or in addition to an interstate highway. In designating such routes, States are required to consult and coordinate with affected local jurisdictions and other affected States to ensure consideration of impacts and continuity of designated routes. To assist a State routing agency in determining an acceptable alternative route, DOT developed a guidance document entitled, "Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials". It should be emphasized that although this guidance document provides a methodology for analyzing alternative routes, it is not the only methodology which can be used when conducting an analysis of routing alternatives. State routing agencies may use equivalent routing analyses which consider overall risk to the public; thus, they may develop better methods of risk assessment to identify important risk factors peculiar to their own situations. Under Docket HM-164, state governments are given considerable latitude to carry out their highway routing functions. The routing criteria and requirements for the transportation of radioactive materials have been effectively applied by a number of State governments for several years.

Routing of Non-radioactive Materials

The Department is considering the extent to which, if at all, it should exercise its rulemaking authority with respect to the routing of non-radioactive hazardous materials. This is important because, although the current regulations recognize the authority of state and local governments to make routing decisions concerning non-radioactive hazardous materials, the regulations do not provide a framework which ensures that such decisions are consistent, cost-effective and, in fact, conducive to the public safety. Since the publication of the final rule in Docket HM-164, many requests and solicitations have been made to the Department by Congress, by State and local governments, by industry, and by others expressing concern over the further use of the Department's routing authority in its application to hazardous materials, other than radioactive hazardous materials, and of the public safety implications of doing so.

The concern of many sectors of the public and their deep interest in these matters stem from a variety of factors, which are discussed below.

Inconsistent and Ambiguous Federal Regulations

An existing DOT regulation (49 CFR 397.9) currently addresses the highway routing of non-radioactive hazardous materials, including Class A or Class B explosives. Section 397.9, which was issued under statutes that predate the HMTA (18 U.S.C. 834 and 49 U.S.C. 304), states, in part:

Section 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. This paragraph does not apply to radioactive materials (see § 177.825 of this title).

Except for hazardous materials shipments originating from or destined to heavily populated areas, this regulation prohibits motor carriers from operating placarded vehicles containing non-radioactive hazardous materials on routes, including Interstate System highway routes, that pass through heavily populated areas, unless there is no practical alternative. But there are few, if any, heavily populated areas or major cities that are not connected by the Interstate system. In recognition of the fact that accident statistics, both in terms of the frequency and severity of accidents, support the use of Interstate System highways, DOT published an interpretation of 49 CFR 397.9 in the Federal Register on November 23, 1977, (42 FR 60078) which states that when "a vehicle is passing through a populated or congested area, use of a beltway or other bypass would be considered the appropriate route." This interpretation, which itself is somewhat ambiguous and perhaps not widely known, greatly restricts the scope of § 397.9. Also, that section has been determined by the Department's General Counsel not to justify local prohibition of hazardous materials transportation conducted in accordance with the HMR. See Appendix C to Inconsistency Ruling 1, 43 FR 16954 at 16961, published April 20, 1978.

Another DOT regulation (49 CFR 397.3) not issued under the authority of the HMTA, expressly recognizes state and local traffic regulations, and states:

Section 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.

This regulation sanctions State and local requirements which concern the mechanics of driving and handling vehicles. It might appear that this regulation could also be interpreted to mean that if such requirements include routing restrictions for certain types of non-radioactive materials, then motor carriers are expected to comply with them. However, in a 1976 letter to the Nuclear Regulatory Commission, the Department's General Counsel stated that 49 CFR 397.3 requires compliance only with state or local requirements related to the mechanics of driving and the handling of vehicles of the type contained in Part 397 and that it does not require compliance with state or local restrictions that are tantamount to a ban on hazardous materials transportation. See Appendix C to Inconsistency Ruling 1, 43 FR 16954 at 16961, published April 20, 1978.

Recent Congressional action (the Motor Carrier Safety Act of 1984), when read in the light of Secretarial rulemaking delegations, has in effect transferred at least partial responsibility for these regulations to RSPA. Section 206(b) of the Motor Carrier Safety Act of 1984 states:

The Secretary shall not eliminate or modify any existing motor carrier safety rule pertaining exclusively to the maintenance, equipment, loading or operation (including routing) of vehicles carrying materials found to be hazardous for the purposes of the Hazardous Materials Transportation Act (49 U.S.C. App. 1801-1812) unless and until an equivalent or more stringent regulation has been promulgated under the Hazardous Materials Transportation Act.

This provision includes Part 397 of the Federal Motor Carrier Safety Regulations and, as a result, no portion of Part 397 which pertains to hazardous materials transportation may be modified, unless an equivalent or more stringent regulation is issued under the Hazardous Materials Transportation Act.

Another regulation (49 CFR 177.810) with important routing implications was issued under the HMTA and authorizes restrictions on the transportation of non-radioactive hazardous materials through certain urban tunnels. Section 177.810 states:

Section 177.810 Vehicular tunnels.

Except as regards radioactive materials, nothing contained in Parts 170-189 of this subchapter shall be so construed as to nullify or supersede regulations established and

published under authority of State statute or municipal ordinance regarding the kind, character, or quantity of any hazardous material permitted by such regulations to be transported through any urban vehicular tunnel used for mass transportation. For radioactive materials, see § 177.825 of this part.

A fourth regulation (49 CFR 177.853(a)) that could be interpreted as establishing a criterion for the routing of hazardous materials states, in part:

Section 177.853 Transportation and delivery of shipments.

(a) *No unnecessary delay in movement of shipments.* All shipments of hazardous materials shall be transported without unnecessary delay, from and including the time of commencement of the loading of the cargo until its final discharge at destination.

The intent of this section is to prevent hazardous materials shipments from sitting for extended periods of time on loading docks or in idle trucks. However, this section might also be interpreted to mean that hazardous materials should travel via the fastest route available; in other words, it could be interpreted as establishing a routing criterion that the in-transit time of hazardous materials shipments be minimized.

In a recent Congressional report, entitled "Promoting Safer Highway Routing of Ultrahazardous Cargoes: DOT Oversight", it was pointed out that these regulations are in many respects ambiguous and entail potentially conflicting routing criteria. RSPA is seeking suggestions for the elimination or amelioration of these problems.

The Need for Consistent and Cost-effective Routing Standards

There are a variety of other factors that underlie the concerns of many sectors of the public in the routing of hazardous materials and their deep interest in these matters. Currently, there exists a large number of State and local routing requirements and control measures for the transportation of non-radioactive hazardous materials. In some cases, these requirements and control measures (such as speed and time of day restrictions) can serve to impede the free flow of commerce, with little or no demonstrable effect on public safety. In some cases, they merely result in the exportation of risk from one jurisdiction to other jurisdictions, which may not be as prepared or as able to deal with such risks.

In cases where reducing population exposure is of primary concern (e.g., 49 CFR 397.9, discussed above). State and local governments have attempted to route hazardous materials shipments via secondary roads, despite the fact that

the Interstate System highways generally have the lowest truck accident rate per mile and provide the shortest distance between major cities. In many cases, requirements have been imposed on the basis of rudimentary and incomplete analyses, or by a decision-making process that is essentially subjective and undocumented. While it is difficult to assess the net overall effect of these routing requirements, either in terms of enhancing public safety or of improving national transportation efficiency, it is likely that these requirements have caused confusion and concern and have greatly complicated the logistical network involving both hazardous and non-hazardous materials shipments.

On the other hand, RSPA realizes that virtually every community in the United States is subject to the transportation of hazardous materials, and that the people of these communities have a direct stake and interest in a safe and efficient national system for the transportation of these materials. For example, gasoline and many agricultural chemicals are hazardous materials which are needed in virtually every community; serious economic dislocations and social hardships could occur in these communities, if such materials are effectively banned by neighboring jurisdictions. In fact, the transportation of hazardous materials is vital to the nation's economic well-being, its competitive international standing, and its national security.

In addition, no other industrial activity in the United States as vast and complex as the transportation of hazardous materials has a comparable safety record. The safety record of both radioactive and non-radioactive hazardous materials transportation has been, and continues to be, excellent; and this record, from a highway transportation safety standpoint, can be correlated in large part to the extensive use of the Interstate System highways. This system generally connects heavily populated urban areas. Large volumes of hazardous materials are moved annually into and out of the industrial and commercial zones that surround or are located within such areas. Generally, the population exposed to hazardous materials shipments in such areas cannot be significantly reduced, unless there are significant reductions in the amount of hazardous materials moved into and out of such areas. In particular, the total population exposure to hazardous materials shipments in such areas cannot be significantly reduced by banning or diverting hazardous materials shipments that merely *transit* such areas. Likewise, the magnitude of

the task facing emergency response personnel in such areas is not significantly reduced by such bans or reroutings. Such actions, however, can significantly increase the tasks of emergency response personnel in other areas, often nearby towns and rural communities, who may not be as well trained and equipped as responders in metropolitan areas.

In summary, it is understandable that State and local governments should focus their attention on the routing of hazardous materials. The Department has consistently recognized the significant role of State and local governments in making highway routing decisions. The Department knows that it lacks, and cannot possibly duplicate, their expertise and knowledge concerning local highways, land use patterns, highway geometry, and the emergency response capabilities of their jurisdictions. Nevertheless, there appears to be a need for uniform national standards to prevent the widespread proliferation of varying, conflicting, counterproductive, and unduly burdensome hazardous materials routing requirements by State and local governments.

Some Possible Regulatory Routing Options

Three alternatives to existing routing requirements are outlined below to illustrate possible approaches that might be used to regulate the highway routing of non-radioactive hazardous materials. At this time, RSPA is not proposing to adopt any of these alternatives. They are presented merely as illustrations of the type of regulatory authority which RSPA might exercise under the HMTA.

A. *Require compliance with routing standards and an administrative/analytic process similar to those required for radioactive materials.* This option would establish Federal routing standards for certain types of hazardous materials (e.g., materials extremely toxic by inhalation and Class A and B explosives) similar to those which exist for the routing of certain types of radioactive materials. This option might require use of Interstate System highways, unless a State routing authority designates an alternative "preferred" route based on an objective, documentable risk-analysis methodology and full consultation with other affected jurisdictions. In the absence of a State designated "preferred" route, and in place of utilizing Interstate System highways, motor carriers might be required to ensure that any motor vehicle containing non-radioactive hazardous

material for which placarding is required is operated on routes that minimize transportation risk. This would require a risk analysis of one or more alternative routes. The administrative and analytical process to be pursued by states in designating a "preferred" route would be contained in guidelines or a guidance document which would set forth the minimum requirements for conducting a risk assessment of alternative routes. Such a document currently exists and is entitled "Guidelines for Applying Criteria to Designate Routes for Transporting Hazardous Materials." This document is being revised and will be republished by RSPA in the near future.

B. Require shippers and motor carriers of non-radioactive hazardous materials to conduct risk analyses of highway routes, in accordance with certain Federally prescribed procedures, and to select only the safest routes for the transportation of hazardous materials. This option follows very closely the recommendations of the recent Congressional report on the routing of certain hazardous materials, noted previously. Under this option, DOT would promulgate by regulation a formula for the risk analyses of highway routes for non-radioactive hazardous materials. The regulation would specify the types of data to be taken into account in such analyses, e.g., demographic data, highway characteristics, location of emergency response resources, accident data per route segment, etc. The regulation would tailor the routing analyses to the particular public health and safety threats posed by hazardous materials, with more stringent analysis standards being applied to the more dangerous types of hazardous materials. Such standards would require the use of alternative-route risk analyses to ascertain routes with the lowest risk. To make enforcement possible, a recordkeeping requirement would be included. The records would contain: the analysis of the routes, alternative routes considered, and a certification that the safest route is taken.

C. Require each motor carrier of certain types of hazardous materials to be licensed for each non-radioactive hazardous materials route. This option would require that each motor carrier obtain prior Departmental approval of any route to be used for the transportation of non-radioactive hazardous materials. Motor carriers might be required to file proposed route plans supported by routing analyses, and public comment might be solicited

on the routes proposed. If a carrier's route proposal were accepted, RSPA would authorize carrier operation under the plan for a specified period of time, perhaps two years. Plan approval would preempt state and local requirements not consistent with the plan; however, State or local requirements which affect the carrier that are consistent with the plan might be expressly incorporated into the plan by the carrier or RSPA. As with the other options, it would be necessary to establish some general criteria for evaluating route plans. Alternative versions of this option would involve similar licensing programs at the State or local level.

Request for Comments

Comments are solicited concerning the preceding discussion of possible regulatory options and on the following questions. Supporting data and analyses will enhance the value of comments submitted.

1. Should non-radioactive hazardous materials be subjected to any Federal highway routing requirements?
2. If so, what types, quantities, and forms of non-radioactive hazardous materials should be subject to such regulatory requirements?
3. What routing criteria, or combination of criteria (e.g., minimization of the population exposed to such shipments, or of the time people are exposed to such shipments) should be considered for any such routing requirements?
4. Should the risk analysis be based on absolute risk or on relative risk considerations, or on a combination of both?
 - a. What is an acceptable level of absolute risk, below which alternatives need not be analyzed?
 - b. When should relative route risk analyses be required?
 - c. If a relative route risk analysis is performed, should a minimum level of relative risk reduction be required to justify a routing decision?
5. What factors and data should be taken into consideration in alternative-route risk analyses?
6. Who should conduct the analyses: industry (shippers and/or carriers), or the government?
7. To what extent does industry now conduct such analyses?
8. How often should they be conducted?
9. How expensive are such analyses?
10. What are the additional costs and the safety benefits to industry, emergency response personnel, and the public of imposing routing requirements?
11. What are the costs and benefits of imposing routing requirements on

hazardous materials shipments that merely transit a city, i.e., that do not originate or terminate in that city?

12. What are the costs of communicating to interested parties (e.g., via road signs, maps) routes that are prohibited from, or restricted to, certain types of hazardous materials?
13. What should be the roles of Federal, State and local governments in the routing of non-radioactive hazardous materials?
14. What role, if any, should carriers and/or shippers play in the routing of non-radioactive hazardous materials?
15. Is a generalized DOT requirement preferable to a procedure that entails an individual DOT examination of some or all routes?

16. To what extent, if at all, should DOT require consultations with or agreements by, all affected jurisdictions, as conditions precedent to the imposition of a routing requirement?
17. What role, if any, should DOT play in arbitrating or resolving interstate or interjurisdictional routing issues?
18. Should there be Federal, State or local licensing of non-radioactive hazardous materials transportation routes?

Commenters are not limited to responding to the questions raised above and may submit any comments and evidence relevant to the highway routing of non-radioactive hazardous materials. In addition, commenters are encouraged to provide comments on "major rule" considerations under the DOT regulatory procedures (44 FR 11034), potential environmental impacts subject to the National Environmental Policy Act, information collection burdens which must be reviewed under the Paperwork Reduction Act, and economic impact on small entities subject to the Regulatory Flexibility Act.

It is likely that any rulemaking issued to implement the concepts discussed in this ANPRM will have sufficient Federalism implications to warrant the preparation of a Federalism Assessment pursuant to Executive Order 12612 ("Federalism") (52 FR 41685, October 30, 1987). Therefore, commenters are requested to address, with respect to each possible regulatory proposal, the following matters:

- (1) the extent to which each proposal would impose additional costs or burdens on the States, including the likely source of funding for the States and the ability of the States to fulfill the purposes of that proposal;
- (2) the extent to which each proposal would affect the States' ability to discharge traditional state governmental

functions, or other aspects of state sovereignty; and

(3) the extent to which each proposal is consistent with the requirements in Executive Order 12612 that Federal agencies shall: (1) encourage States to develop their own policies to achieve program objectives and to work with appropriate officials in other states; (2) refrain, to the maximum extent possible, from establishing uniform, national

standards for programs, and when possible defer to the states to establish standards; and (3) when national standards are required, consult with appropriate officials and organizations representing the states in developing those standards.

Commenters should be aware that section 105(b) of the HMTA requires DOT to consider any relevant suggestions of the Interstate Commerce

Commission before issuing any regulation with respect to the routing of hazardous materials.

Issued in Washington, DC on April 1, 1988, under the authority delegated in 49 CFR Part 106, Appendix A.

Alan I. Roberts,
Director, Office of Hazardous Materials Transportation.

[FR Doc. 88-7683 Filed 4-6-88; 8:45 am]
BILLING CODE 4910-60-M