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BEFORE THE SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS,
HOUSE COMMITTEE ON ENERGY AND COMMERCE

September 21, 1987

Mr. Chairman and Members of the Subcommittee:

I am pleased to appear before you today to discuss the motor vehicle safety issues raised by proposals to control the vapors produced by gasoline refueling. With me at the witness table from the National Highway Traffic Safety Administration (NHTSA) are Barry Felrice, Associate Administrator for Rulemaking; George Parker, Associate Administrator for Enforcement; and Erika Jones, Chief Counsel.

You have asked us to answer a number of questions about vapor recovery, but at the outset I want to summarize the position we are taking on this issue. It is our view that the onboard vapor recovery systems proposed in the notice will add complexity to vehicle fuel systems and increase the opportunities for fuel system fires, both in crashes and in non-crash circumstances. In our testimony before the Subcommittee at its April 27 hearing on this issue, we testified to the effect "that there will be some unquantifiable, increased risks of crash and non-crash fire associated with onboard controls." In general, the inclusion of vapor recovery systems in fuel systems will increase the number of components that could fail. Some modes of failure could increase the risk of fuel-system fires -- both in crash and non-crash situations. Although we believe that additional complexity will present an additional risk,

whatever the design of the onboard system, we also believe that this risk might be reduced if there were adequate leadtime to develop onboard systems and to test their safety. We believe, however, that onboard systems will not improve, and could degrade, safety.

We anticipate that the public comments, including those from vehicle manufacturers, insurance organizations, and others concerned with the safety issues associated with this proposal, will address EPA's statement that "straightforward, reliable engineering solutions exist for each of the potential problems identified," and that we will thus have additional information with which to gauge the implications of these solutions. We intend to address these implications in our comments to EPA. To help in preparing these comments, we are also gathering information about the alternative designs that may be available for onboard controls. Even with such information, however, we must be cautious in projecting the effectiveness of any solutions to increase safety. While EPA lists several ways in which it believes that its proposals could improve safety, we are not yet convinced that a safety gain would be realized. For example, one of the possible safety improvements suggested by EPA involves a fuel tank bladder, which may present significant problems, some safety-related, from the standpoint of function and durability. In any event, the bladder system is not, in our view, a viable near-term option. Thus, more likely compliance strategies will involve complications to the existing fuel systems, which may not have offsetting safety gains.

You asked that we address the issue of the need for an automatic safety

review of EPA's mobile source regulations. You have introduced H.R. 3196, which would require the EPA Administrator to consult with the Secretary of Transportation and to include such recommendations as the Secretary may make to prevent deaths and injuries from traffic accidents. If the EPA Administrator disagreed with the Secretary, he would be required to make specific findings that the Secretary's recommendations were inconsistent with the Clean Air Act or other Federal law and that the EPA action complied with the Clean Air Act. With regard to the current rulemaking on vapor recovery systems, the EPA has consulted with the Department, as required by section 202(a)(6) of the Clean Air Act. On the basis of EPA's statement today that it will exercise its existing authority under the Clean Air Act to solicit and respond to DOT's safety-related comments on motor vehicle rulemakings, we believe that administrative improvements to our (EPA and NHTSA's) coordination procedures could accomplish the essential purposes of H.R. 3196, making that legislation unnecessary. We are now working with EPA to improve these procedures.

As noted in its notice of proposed rulemaking on vapor recovery, the EPA has adjusted the proposal to a degree in response to our preliminary comments. The two-year leadtime provided in the draft proposal has evolved into the statement in the published notice that a leadtime of "at least two years may be adequate for the vast majority, if not all, vehicle families." However, we question whether the phrase "at least two years" differs significantly from "two years" as proposed in the draft, and whether the front-loaded phase-in proposed by EPA, with 70 percent of vehicles required to conform in the first year, would in fact permit much in the way of leadtime for design and testing. We therefore remain

concerned that the time allowed may not be adequate, and we will give careful attention to the manufacturers' comments on this point.

We also question the assurance with which EPA has found that systems can be built which will not "adversely affect vehicle safety." The vapor recovery systems which are capable of being implemented in the near term would introduce significant additional complexity into vehicle fuel systems. We cannot say at this time that there will not be adverse safety effects from these vapor recovery systems. The bladder system, which has been discussed as an alternative to a canister-based system, presents serious potential problems, as noted above.

On balance, while EPA has noted several of our technical comments, the July 22 notice does not resolve our larger concern with the long-term safety consequences of onboard recovery systems, nor does the associated technical report. We understand that EPA intends to consider our comments on the manufacturers' submissions, and to issue a reproposal before taking any final action. We agree with you that the coordination procedures can be further improved for future rulemaking on motor vehicle issues, and, as noted above, we are working with EPA to that end.

You have asked for our understanding of EPA's positions regarding the availability of engineering solutions to the problems associated with the proposal and regarding possible safety improvements that could be enjoyed with onboard controls. The adverse safety consequences of more complex fuel systems are amply illustrated by the recent Ford ambulance case, in which the fuel expulsion events were influenced by emissions-reducing

devices which tend to increase the temperature of the exhaust or to prevent the venting of vapor from the fuel system. Despite the engineering involved in the development of such fuel systems, safety problems arose which led to the recall of the ambulances. It should be noted that since Ford's intended modifications dealt with systems covered by EPA regulations, Ford was required to receive EPA concurrence on at least one aspect of its intended modifications.

Another factor in the Ford ambulance case was the volatility of the fuel used in the ambulances. We note that EPA has issued a concurrent proposal to control gasoline volatility during the summer months. NHTSA has generally concluded that the higher the Reid Vapor Pressure of the gasoline, the greater the probability of fuel expulsion events. We are therefore interested in measures that would control the volatility of gasoline under a variety of operating conditions, and look forward to reviewing the comments filed on the EPA proposal. Also, we believe that regulating the maximum pumping rate at the filling station, as proposed by EPA, is needed to assure that onboard systems, should they be required by EPA, could be properly and safely designed.

You have also asked for our views on the safety issues that may be raised by Colorado's oxygenated fuels program, under which vehicles would be required to operate on blends of gasoline with other fuels such as methanol or ethanol. I should note that NHTSA does not maintain general in-house expertise on all of the properties of various fuels. Of course, we are familiar with the vehicle safety consequences of high volatility gasoline, and we will try to answer your question from that perspective.

We know that the volatility of gasoline is determined by the distillation process and the type and amount of additives. All things being equal, the addition of alcohol to gasoline to make oxygenated fuel will raise the Reid Vapor Pressure and make it more volatile, thereby increasing the likelihood of fuel expulsion events. We do not have the expertise to perform a detailed evaluation of specific blends such as those that Colorado proposes to require, nor do we have information to assess the practicability or cost of any possible measures to control volatility. It is our understanding that EPA has encouraged Colorado to consider establishing controls on gasoline volatility as a means of limiting this problem.

You asked us to address several points relating to Ford's recent decision to withdraw from the gasoline-engine ambulance market, based in part on the new emission standards for those vehicles, which Ford stated will require it to add catalysts. In response to your first question, EPA did not consult with us regarding the development of the new emission standards referenced by Ford. In answer to your other questions, we have no reason to believe that the problems identified by Ford are limited to ambulances. We have no specific information as yet concerning other vehicles using catalysts, but we will be closely monitoring these types of vehicle during the coming year.

The last question in your letter of invitation asked about our involvement in EPA's development of heavy duty truck regulations for model years 1991-1994, particularly in regard to the safety of trap technology. We understand that EPA intends to consult with the Federal

Highway Administration on the implications of these regulations for the operation of heavy trucks and buses. At this point EPA has not consulted with us, but we anticipate that FHWA will coordinate its response with us as part of the formal review process within the Department.

This concludes my remarks. I would be glad to try to answer any questions.