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81-02-44

AMERICAN  
TRUCKING  
ASSOCIATIONS, INC.

1616 P Street, N.W., Washington, D. C. 20036

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April 24, 1981

Director  
Standards and Regulations Division  
Attn: ONAC Docket 81-02  
(Medium and Heavy Trucks)  
ANR-490  
U.S. Environmental Protection Agency  
Washington, D.C. 20460

Re: Noise Emission Controls Regulations for Medium  
and Heavy Trucks, 40 C.F.R. Part 205

Dear Sir:

Enclosed please find a duly-signed original and one  
(1) copy of the American Trucking Associations, Inc.'s Comments  
in the above-styled proceeding.

Please date-stamp the enclosed file copy of this letter  
and return to the undersigned in the self-addressed, postage  
prepaid envelope which has been provided for your convenience.

Very truly yours,

*Alan J. Thiemann*  
Alan J. Thiemann

Enclosures

AJT/acb

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BEFORE THE  
ENVIRONMENTAL PROTECTION AGENCY

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NOISE EMISSION CONTROLS REGULATIONS  
FOR MEDIUM AND HEAVY TRUCKS

40 C.F.R. PART 205

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COMMENTS OF  
AMERICAN TRUCKING ASSOCIATIONS, INC.

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Nelson J. Cooney  
General Counsel  
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Larry W. Strawhorn  
Director  
James R. Barr  
Environmental Specialist  
ENGINEERING DEPARTMENT

1616 P Street, N.W.  
Washington, D.C. 20036

Dated: April 24, 1981

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COMES NOW American Trucking Associations, Inc. (ATA), and submits these comments by its Engineering Department in response to the notice deferring the effective date of the 1982 noise emission standard, published in the Federal Register on January 27, 1981 (46 Fed. Reg. 8497). Although it deferred imposing the standard, the agency invited comments on whether a further deferral would be appropriate. Specifically, it also requested information on the impact of this action on the trucking industry.

ATA is the national organization of the trucking industry, representing all types of motor carriers of property, both for-hire and private, on whose behalf it customarily appears in proceedings before federal agencies, including EPA, DOT, and ICC, and the federal courts. It is a non-stock, non-profit corporation organized and existing under the laws of the District

of Columbia, with offices at 1616 P Street, N.W., Washington,  
D.C. 20036.

As the national representative of the trucking industry, who are the ultimate consumers of vehicles affected by regulations such as the instant one, ATA is vitally interested in the safety and operation of personnel and equipment utilized by motor carriers. ATA has participated in previous proceedings under the Transportation Noise Program, and are supportive of its goals. Consequently, we urge the agency to give full consideration to the attached comments of ATA's Engineering Department.

Respectfully submitted,

Nelson J. Cooney  
General Counsel

Alan J. Thiemann  
Attorney

Attachment

## COMMENTS

In reaching its conclusion that the 80 dB standard for medium and heavy trucks should not be withdrawn, but only deferred for one year, EPA purports to respond to numerous arguments raised by engine and vehicle manufacturers, particularly International Harvester Co. and Mack Trucks, Inc., in their petitions for reconsideration. ATA filed comments supporting those petitions and expanding upon several burdens of direct consequence to motor carriers: ①

- 1) noise-control designs will be short-lived due to impending changes necessitated by various emissions regulations; ②
- 2) geographic and use differences in engines will require vastly different noise-reduction designs, resulting in high costs which will ultimately decrease engine family availability; ②
- 3) an indoor test is just being refined for use which would help decrease testing costs on new designs; and ④
- 4) many noise-control designs involve masking engine components, which inhibits maintenance and hides potential safety problems. ⑤

No mention is made in the Administrator's decision, dated January 19, 1981, of any of ATA's comments. We assume that they were received while that decision was being drafted.

Therefore, ATA urges the agency to examine our earlier comments, attached as Appendix A, which refutes several statements made by the Administrator. ⑥ Additional comments offered here are intended to supplement our January filing.

ATA, while supporting the objective of quiet trucks, firmly believes that current noise-control techniques required to meet the 80 dB(A) standard for new medium and heavy trucks are

both expensive and unacceptable. (7) Experience gained in efforts aimed at developing operation and maintenance data on vehicles exceeding the existing regulations for new and in-use trucks, including EPA's Quiet Truck Program, demonstrate the correctness of these conclusions. (8) Until better technology is available to enable manufacturers to meet an 80 dB(A) level without imposing such operational and economic burdens on the trucking industry, we urge EPA to suspend indefinitely the effective date for this regulation. (9)

One critical focus of EPA's decision must be on the regulation's cost/benefit analysis. Without disregard for the benefits realizable through community noise level reduction, ATA's figures suggest that the costs associated with the present regulation are far out of line with those benefits. (10)

Our estimates indicate that the cumulative cost to the entire trucking industry through the first five years of this regulation is more than \$2.5 billion. (11) Taking this cost data down to a more workable level, using EPA's own figures for purchase and annual costs (with an eight year depreciation), the annual added noise abatement cost for an average vehicle combination is \$252. (12) From an operational perspective, the added annual cost of the regulation for the same equipment amounts to \$5.51<sup>CENT</sup> per mile, which translates to approximately a one-half of one percent increase in carrier operating costs. (13) This is not an insignificant number, especially when one realizes that a motor carrier's

1 All data is fully developed in the economic analysis accompanying these comments, Appendix B.

after-tax profits usually range from 2.0 to 2.5 percent. (14)

~~A second concern related to industry costs stems from the real possibility of double or triple noise certification of medium and heavy trucks. (15) Presently, there is much uncertainty surrounding the fate of the 1984 and 1986 gaseous and particulate emissions standards. However, if they are put into effect in those years, it would force manufacturers to redesign, retest, and recertify their entire engine families because of the likelihood of changes in noise characteristics resulting from design changes to meet different emission standards. (16) Clearly, substantial costs to motor carriers are associated with this government-imposed planned obsolescence in addition to the manufacturers' costs, which increase the price of vehicles to consumers. (17)~~

~~Such obsolescence requires both larger parts inventories and additional training for maintenance personnel for carriers, thereby increasing their operating costs. (18) In a time when carriers and manufacturers are jointly striving to standardize replacement parts and maintenance procedures, the problems caused by obsolescence are particularly unhelpful. Beyond these considerations, though, all of these additional costs are incurred with no greater noise-reduction benefits than would already have been achieved, making such costs totally irrational and inflationary. (19)~~

~~At a minimum, then, ATA believes EPA should defer the effective date of the instant regulation until such time as it becomes clear what will happen with the 1984 emission standards. (20) At that time, EPA will be able to assess properly the costs of the noise-reduction regulation in conjunction with new technological~~

information, current fuel consumption figures, and the state of the economy <sup>(20)</sup> otherwise, given ATA's cost estimates, we contend that EPA should consider other alternatives to reducing overall community noise levels which we believe are more in keeping with the Reagan Administration's philosophy of regulation: <sup>(21)</sup>

- 1) adopt an averaging approach to achieve a less-than-81 dB(A) standard with a not-to-exceed limit of 83 dB(A), or <sup>22</sup>
- 2) extend the Buy Quiet Program. <sup>23</sup>

Theoretically, either of these alternatives or their combination would represent steps toward quieter trucks, but in a manner which does not unjustifiably burden the trucking industry. On a practical level, these alternatives will encourage engine and original equipment manufacturers to pursue effective and efficient noise control technology. Thus, even if EPA ultimately concludes that a standard lower than 83 dB(A) is required, a position ATA seriously questions based upon current data, then the agency should adopt one of these alternatives and defer indefinitely the instant regulation. <sup>(24)</sup>

#### CONCLUSION

In summary, ATA reaffirms its support for the economical and efficient manufacture, operation, and maintenance of quieted vehicles. We have serious doubts concerning the cost/benefit ratio of the current 80 dB noise emission standard, especially on the basis of our extensive cost analysis <sup>(25)</sup> Because of the continuing pendency of 1984 and 1986 gaseous and particulates emission standards, noise-control designs geared for existing engines will be rendered useless, requiring redesign, retesting,

and recertification to account for those changes. This will raise costs even higher with no concomitant noise reduction benefits. Other alternatives exist and could be adopted in the meantime, while the instant regulation is deferred.

Respectfully submitted,

Larry W. Strawhorn  
Director  
James R. Barr  
Environmental Specialist  
ENGINEERING DEPARTMENT

BEFORE THE  
ENVIRONMENTAL PROTECTION AGENCY

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NOISE EMISSION CONTROLS REGULATIONS  
FOR MEDIUM AND HEAVY TRUCKS

40 C.F.R. PART 205

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COMMENTS OF AMERICAN TRUCKING ASSOCIATIONS, INC.  
IN SUPPORT OF PETITION FOR RECONSIDERATION  
OF SECTION 205.52(a),  
THE 1982 STANDARD

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Dated: January 9, 1981

equipment builders have no choice in meeting the 1982 standards but to use methods of noise reduction which are unsatisfactory to them as well as motor carriers. ATA supports a deferred effective date for the new truck noise standards because of issues that individually and collectively lead to increased initial vehicle cost, as well as increased operating costs:

- (1) short-lived noise control designs.
- (2) decreased engine family availability.
- (3) restrictive test procedures.
- (4) increased use of engine and transmission noise enclosures.

#### DISCUSSION

Generally, the trucking industry acknowledges its responsibility to use quiet equipment and we realize that achievement of that objective may involve reasonable increased costs. In this case, however, the magnitude of the decrease in noise called for in the 80 db(A) noise standard, the inordinantly high costs associated with this standard, and the manner in which it will be implemented do not justify the 80 db standard in 1982.

Truck manufacturers have indicated to ATA, EPA, the Department of Transportation, the Office of Management and Budget, the Department of Commerce and others that the existing regulatory framework for new truck noise reduction will cause an inefficient utilization of their engineering and capital resources. This problem arises from the timing of the regulation, the nature of state of the art noise reduction techniques, and because truck noise levels are now at a point where it takes large increases in resource expenditures to achieve even a very

turbocharging to meet the lower requirements. As a result, the second generation vehicle, using the same noise control configuration, exhibited a 0.8 db(A) increase in pass-by noise level over that of the first generation vehicle. Obviously, a reduction of the noise level would have required redesigning the noise control configuration--precisely what would be required in 1984.

Short-term vehicle noise reduction configurations will adversely affect the manufacturers and the consumers. The trucking industry will feel these impacts in both increased purchase price and operating costs. At a minimum, different noise control packages used within two years will require (1) that mechanics must service many different noise reduction designs, thus, increasing maintenance time and, (2) a large and varied inventory of spare parts be maintained.

A delay of the effective date of the standard to coincide with the effective date of the 1984-85 emission standards, as some manufacturers have requested, would prevent most of this apparent inefficient use of industry resources.

## 2. Decreased Engine Family Availability

Truck companies use different vehicle combinations in varied applications, in all parts of the country in differing climates for a large difference in hours of service and vehicle life. Some examples of this are small engines, cabs and transmissions in urban areas, larger engines, cabs and transmissions for long-haul highway use, engine brakes in mountain areas, exhaust blowers and transmission power take-offs for bulk

off and exhaust blower to be used for unloading in bulk commodity transport) the contractor is months behind the original goal for bringing it to the desired decibel level. Further complicating the problem is a tonal vibration emanating from frame rails via the transmission through the transmission mounts. Modifications to the transmission mounts are expected to solve some of the problem. It is unclear at this time, however, whether this structurally-related problem is characteristic of that particular vehicle combination, is limited to random individual vehicles, or is associated with the individual manufacturer's truck line. EPA's own experience, therefore, demonstrates the magnitude of the problem that a diverse industry of consumers presents to manufacturers facing new noise level standards.

Given the state of the art for noise reduction that now exists, manufacturers may deal with their dilemma by cutting the number of variables that must be considered. A reduction in either engine or vehicle configuration availability represents a possible concomitant reduction in the variety and efficiency of services supplied by the motor carrier industry.

### 3. Restrictive Test Procedures

Current noise test procedures require outdoor testing, which may be conducted only during specified weather conditions, creating an increase in the required test time. The Motor Vehicle Manufacturers Association is developing an indoor test that would correlate to the outdoor procedure now in use. This all-weather test procedure will aid in reducing the time and cost involved in testing various vehicle configurations for

an incident that occurred during testing of a truck having a full set of such enclosures. A slight transmission oil leak, concealed by the noise panels, almost created a critical transmission failure. When the problem was detected, diagnosis of the hard-to-find leak was extremely difficult and time consuming because of the noise shielding. Instead of creating maintenance problems in the short-term, EPA should recognize that sometime after 1982 "quiet" transmissions should be generally available. Those transmissions can be used to meet the 80 db(A) restriction and there will be no need to shield them.

A reduction in vehicle preventive maintenance can be caused by any increase in the time and difficulty necessary for its performance. As a job gets longer and harder to perform, some mechanics may seek a shortcut by removing and not replacing noise panels, without the permission of motor carriers or even over their express orders not to take such action. In addition, many of the noise enclosures do prevent line-of-sight inspections, which are the foundation of a quick safety lane check employed by many carriers. The trucking industry recognizes the need for safe vehicles and is constantly striving to improve its safety record. ATA feels that such enclosures can only serve as a potential deterrent to important routine maintenance and therefore they should be avoided.

The challenge for EPA is to encourage the production of vehicles that are inherently quiet and efficient, while still avoiding solutions which merely hide the problem. Undesirable noise reduction designs (e.g., engine enclosures) will demand a

truck, and truck component manufacturers are currently ascending the steep slope on the learning curve of designing inherently quiet components. Without the additional time that they indicate is required, the efficient peak will not be reached before the regulation requires action. The American Trucking Associations, Inc. supports the quest for basically sound, long-term solutions to truck noise reduction and therefore urges that EPA grant the manufacturers the relief they seek.

Respectfully submitted,

*James R. Barr*

James R. Barr  
Environmental Specialist

**AMERICAN  
TRUCKING  
ASSOCIATIONS, INC.**

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**MEMORANDUM**

TO: James Barr, Engineering

FROM: Richard Staley

DATE: February 24, 1981

**Estimated Costs of Noise Abatement For Medium and Heavy Trucks**

I have examined the material submitted by the Environmental Protection Agency (EPA) in the Federal Register of January 27, 1981, (p. 8497 et seq) relative to the costs involved in abating noise emitted from medium and heavy-duty trucks. These data are based upon an estimated sales volume for the current period, and for 1985, as well as an estimated abatement cost per vehicle.

My commentary on the EPA material will be limited to three fields:

- (1) Adequacy of estimates of sales volumes by vehicle type and fuel used.
- (2) Accuracy of per unit abatement costs
- (3) Impact on the trucking industry

Finally, there is the rather complex problem of dealing with the relative portion of sales represented by diesel-powered vehicles. This may be divided into medium trucks (classes III through VI) and heavy trucks (classes VII and VIII). Data from the Motor Vehicle Manufacturers Association (MVMA) do not reveal any U.S. factory sales of Class III, IV, or V diesels through 1979. Final 1980 data are not yet available. Inquiry to the MVMA (Earl R. Kreher on 2/23/81) reveals no specific information on imported diesel trucks in these classes either. However, there is no indication from MVMA that such equipment exists in any significant numbers -- based on the imported diesel data which are available. (31)

Class VI is a different situation. Domestic and Canadian diesel factory sales in the U.S. totaled 12,360 units in 1980. To this must be added 782 trucks imported by Mack, 325 "other" imports and 3,728 imported diesels representing a pro-rating (classes VI and VII) of Mercedes and Iveco imports which are not otherwise identified by class. Thus, the apparent total diesel factory sales of class VI in 1980 in the United States was 17,195. (31)

A similar breakdown of classes VII and VIII diesel factory sales for 1980 reveals sales from U.S. and Canadian plants in the United States of 137,827 vehicles plus all other imports of 2,155 -- for a grand total of 139,982. 32

To sum up the above, there are presently no (measurable) diesels in medium weight truck classes III, IV and V, and the volume in class VI was 17,195 last year -- representing 21.0% of total class VI sales. (32) This may be compared with a 9.2% diesel penetration for class VI in 1978 and a 12.8% rate in

a final annual sales estimate of 2,125 gasoline-powered vehicles plus 375 diesels -- for a 2,500 unit total. <sup>38</sup>

An estimate of future class VI sales should be independent of any other weight class for the reasons outlined earlier. <sup>37</sup> Also, it should be noted that the unique position of class VI trucks -- representing basically maximum weight 2-axle vehicles -- places this group in an inelastic sales situation. <sup>70</sup> Sales of class VI trucks appear to be a direct function of urban population, and thus recession induced declines in volume represent deferred demand which will be manifested in above average sales in a later period. On this basis, 1980 experience should be ignored, and projections should be based on the average of 1976-1979 -- or 142,500 vehicles. Recognizing the rapidly increasing dieselization in this class, future sales will probably average (in the next five years) about one-third of the total. Thus, the final sales estimates for class VI are: Gasoline 95,000, diesel - 47,500 -- for the annual 142,500 total. <sup>41</sup>

Considering classes VII and VIII together for reasons outlined earlier, and again delating 1980, results in utilizing 1976-79 sales experience. Here, however, total sales trends are somewhat more difficult to determine due to such diverse factors as improved equipment longevity, increasing trucking volumes and changes in vehicle size and weight limits which require new types of vehicles. <sup>42</sup> Recognizing these vagaries, an average annual sales volume over the next five years of 215,000 should prove to be conservative. Also conservative would be

Applying these costs to the estimated annual sales of medium and heavy gasoline and diesel trucks indicates a substantially more severe financial impact than that shown by the EPA. The added annual purchase costs alone will aggregate \$178.21 million in 1980 dollars. <sup>76</sup> Added annual operating costs -- fuel and maintenance -- will aggregate \$52.45 million per year of service. <sup>12</sup> Thus, at the end of five years, the added annual operating costs in 1980 dollars will be \$262.25 million. These costs will continue to increase as more and more "quiet" vehicles are absorbed into the Nation's trucking fleets. <sup>574</sup>

To determine estimated total annual costs, the added purchase price should be pro-rated over a typical depreciation life. The Federal Highway Administration has used 8 years for vehicles in these weight classes. <sup>50</sup> Applying an 8 year straight line depreciation to the added purchase costs yields an annual added cost of \$22.28 million (\$178.21 million divided by 8). The overall annual cost, then is estimated at \$22.28 million plus \$52.45 million, or \$74.73. These costs will become cumulative over time as:

Cumulative Total Annual Truck Noise Abatement Costs  
(in millions)

<u>Year</u>	<u>Annual Cost</u>	<u>Cumulative Costs</u>
First	\$ 74.73	\$ 74.73
Second	149.46	224.19
Third	448.38	672.57
Fourth	747.30	1,419.87
Fifth	1,120.95	2,540.82

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Office of Transportation of the U.S. Dept. of Agriculture  
(USDA) in the monthly Fruit and Vegetable Truck Cost Report.  
The latest such report available covers the month of January,  
1981 for both fleet and owner-operated combinations in such  
services, operating an average of 131,000 miles annually.  
The total costs shown for that month are: Fleet operators -  
104.2 cents per mile, and owner-operators - 108.3 cents per  
mile. (57)

Using the USDA data, the added costs of noise abatement  
will amount to 0.49 and 0.47 percents for fleet and owner-  
operator equipment respectively. (58) While this may seem at  
first blush to be minor, it should be remembered that motor  
carrier profits after taxes are only about 2.0 to 2.5 percent  
in good years. (59) Thus, the added costs represent between 18.8  
and 24.5 percent of final motor carrier net profit. (60)

Finally, while the average large combination travels  
just over 49,000 per year, many regulated motor carriers  
operate in excess of 100,000 miles. Annual mileage in excess  
of 200,000 miles is not unknown for both regulated motor  
carriers and exempt produce haulers. At 100,000 miles per  
year, the annual compliance costs amounts to \$510<sup>00</sup> -- and at  
200,000 miles, this becomes \$1,020 annually per vehicle. (61)

*R.L.S.*