

EPA's Rulemaking Program and Strategies  
for Reducing Surface Transportation Noise

Presented by

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Good Afternoon:

It's a pleasure to be here today to give a you progress report on the U.S. Environmental Protection Agency's Noise Regulatory Program for surface transportation vehicles. The last such report was given in October at the 1977 NOISE-CON. Since then the program has moved ahead considerably on almost all fronts. In just a few days EPA will publish the proposed regulatory package for new motorcycles and their replacement mufflers. I will discuss this particular program in a few minutes. Those of you who have followed EPA's interstate railroad noise program are aware that the Agency is working almost night and day to revise the initial regulation by the Court-imposed deadline of August 23, 1978. I will have more to say about the progress we have made here a little later. While the intent today is to highlight the motorcycle and railroad noise programs, I want to try to cover at least cursorily each of the nine other Surface Transportation Regulatory Programs we currently have underway. At the end, I would be glad to take questions about specific programs to fill any gaps.

Before beginning the progress report, I would first like to briefly cover some of the history and strategy behind the Agency's implementation of the provisions in the Noise Control Act regarding surface transportation noise control. It has been more than five years since the Act has passed, overwhelmingly I might add, by the Congress. Three sections of the Act spell out EPA's responsibilities for requiring by regulation the reduction of noise from products in the surface transportation category. Sections 17 and 18 impose, respectively, specific deadlines on EPA for regulating noise from interstate railroads and motor carriers. The third applicable section, Section 6, is broader. It does not identify specific transportation products for regulation but charges EPA to identify major noise sources in the environment, including transportation products, and proceed to regulate them. There are other differences between Sections 6 and 17 and 18. Whereas Section 6 limits noise regulation to newly manufactured products at the time of their sale, Sections 17 and 18 were written by Congress to apply to the in-use operation of both existing and new motor carrier and railroad equipment. Furthermore, Congress did not specify deadlines in Section 6 for the major sources EPA was required to identify. Rather, the Congress included timetables for the development of regulations once the specific products were selected.

Initial regulations under Sections 17 and 18 have been published. But a Federal court has sent EPA back to the drawing board for interstate railroads because, in the Court's opinion, EPA misinterpreted the statutory mandate of Section 17.

Our efforts under Section 6 to identify and regulate major noise sources are still underway. It is under this section that the majority of EPA's surface transportation noise control programs fall. The general strategy the Agency has adopted to regulate major noise sources has been to identify the most serious ones first and then regulate them, if possible, in that order. Thus, medium and heavy trucks were the first surface transportation products to receive the full attention of the Agency. Following closely behind are buses and motorcycles. Other programs underway concern automobiles and light trucks, snowmobiles, motorboats, and guided mass transit systems. In the midst of these product-oriented programs, EPA has also undertaken limited regulatory studies for mufflers and tires -- components responsible for a sizable portion of the noise from surface transportation vehicles. Though they are not crucial to today's discussion, the Agency also has underway programs designed to aid state and local governments in in-use control of several types of surface transportation noise.

#### INTERSTATE MOTOR CARRIERS

In front of all our surface transportation programs is our regulation for interstate motor carriers, which was made final in October 1974 and effective on October 15, 1975. The standards, which apply to vehicles over 10,000 pounds that are operated by motor carriers engaged in interstate commerce, are 88 dBA for stationary runup, 86 dBA up to and including 35 miles-per-hour, and 90 dBA over 35 miles-per-hour. The Department of Transportation's Bureau of Motor Carrier Safety and several state and local governments are currently enforcing the standards. In the first enforcement year, DOT found about 10 percent of the trucks tested were in violation of the standards. In the second enforcement year, that figure was down to about one percent. Clearly, the interstate carrier standards appear to be having their intended but limited effect -- to get the worst noise offenders off the highways.

As of January 1, 1978, all trucks over 10,000 pounds have been subject to the new time-of-sale medium and heavy truck noise emission standards. These new standards will do much more to reduce the noise generated on the nation's highways. However, the medium and heavy truck noise standard is not an in-use operational standard. Therefore, EPA has embarked on a program to revise the existing interstate motor carrier regulation to include an in-use standard of possible equivalent stringency to the new medium and heavy truck regulation. Data on noise emission levels as a function of use, age, and maintenance are now being compiled to determine the appropriate level of such a standard. Twenty-five brand new

representative vehicles will be followed carefully for a period of at least one year, or a distance of 200,000 miles, whichever comes first. Once the studies are completed, we should have sufficient noise degradation data to set an operational standard for post-1977 vehicles operated by interstate carriers which will limit the extent to which these trucks' noise can increase over the levels they had when new.

Several issues regarding this regulation are currently being studied by EPA. One is the possible development of an additional operating standard which would be applicable only under conditions where the road grade is within a specified tolerance, and where rapid acceleration or deceleration may not be necessary. Such a standard, referred to as a "level street standard," would apply to vehicles operating not closer than some specified distance from an intersection and where the road grade is less than plus or minus one percent.

Another issue being studied by EPA is whether it would be advantageous to change the present regulation's 35 miles-per-hour speed breakpoint. Several states and cities have requested that EPA raise it to 40 to 45 miles-per-hour. Without a commensurate adjustment in the allowable noise level, this would, of course, amount to increasing the effective stringency of the overall regulation.

A final issue being considered is the question that has been raised over calibration procedures for testing site pads. Information submitted to the public docket indicated that the correction factor used in a changeover from soft to hard testing sites need further evaluation. The hard-site correction factor is currently being studied and changes are anticipated. The minimum distance for measurement may also be changed. This would permit state and local enforcement at more sites in urban areas.

#### MEDIUM AND HEAVY TRUCKS

EPA's first noise regulation to be issued under Section 6 of the Noise Control Act was the one published nearly two years ago for new medium and heavy trucks. The first of three phased standards became effective on January 1 of this year. The present required level is 83 dBA for all new trucks over 10,000 pounds. By January 1, 1982, a reduced level of 80 dBA will be required. The EPA plans a third step to take effect during the mid-1980s, but has yet to determine what the exact level will be.

The EPA's Noise Enforcement Division is responsible for enforcing the medium and heavy truck regulation. Production verification reports collected thus far generally indicate that manufacturers have had no difficulties meeting the first step of the truck standard. In fact, the

reports show that some new trucks sold after January 1, 1978, already meet the upcoming 1982 standards of 80 decibels, still four years away. Chart 1 gives a representative sampling of measured dBA levels documented for a number of vehicle configurations by several manufacturers.

Several weeks ago the EPA decided to terminate an interagency arrangement with the Department of Transportation to jointly test new technology for quieting large new trucks. The Agency will instead implement a quiet truck demonstration program to provide the information necessary for supporting regulations to achieve noise levels below 80 dBA.

### BUSES

After medium and heavy trucks, buses were the next major transportation product to receive EPA's regulatory attention under Section 6 of the Noise Control Act. A proposed rule was published in the Federal Register on September 12, 1977, and hearings were held in October and November in Washington, D.C., and San Francisco. Since then, the Agency has been reviewing hearings and testimony and comments submitted to the public docket in preparation for issuing a final rule later this year.

The proposed rule, if made final, would apply generally to three types of newly manufactured buses: intercity, transit, and school buses. Two types of noise would be regulated: interior and exterior noise. The first step of the three-stage standard would become effective January 1, 1979. Bus exterior noise could be no greater than 83 dBA, interior noise to 80 dBA, interior noise no more than 86 dBA. After January 1, 1983, exterior noise to would be limited to 80 dBA, interior noise to 83 dBA. After January 1, 1985, the exterior and interior levels would be reduced to 77 and 80 dBA, respectively.

Of the numerous issues raised at the hearings or sent to the docket, I would briefly like to cover four. First, manufacturers questioned the engine brake deceleration test employed in developing the regulation and the policy of engaging demand-controlled fans during testing. These points of contention are being assessed by EPA and will be resolved soon.

A second issue brought up by manufacturers concerns EPA's authority and rationale for instituting an Acoustical Assurance Period and Sound Level Degradation Factor. This issue has proven common to all Section 6 regulations EPA has developed, not just for surface transportation products, but for other categories of products as well. Briefly, the Agency considers the AAP concept necessary because if a new bus is not built to stay at this quieted level for at least part of its working life, providing it is properly used and maintained, and the manufacturers' noise control components are not tampered with, then the regulation itself becomes a nullity and the anticipated health and welfare benefits become illusory. The AAP provision falls far short, however, of imposing a useful life standard, of course. The AAP for new buses is 2 years or 200,000 miles, whichever comes first, not the full life of a bus.

A third issue concerns whether school buses should be regulated. Manufacturers questioned primarily whether the health and welfare benefits were worth the costs. While the Agency recognizes the cost involved, it believes that certain unique aspects of school-bus use may warrant regulation. For example, school buses, more than any other category of bus, are operated predominantly in neighborhood areas. Two, if school buses were not regulated, and all other urban noise sources are, then school buses will eventually become the single loudest surface transportation noise source in urban communities.

A fourth issue that surfaced during the hearings is the need for EPA to review with the Urban Mass Transportation Administration the design specifications for the proposed Transbus and Advance Design Bus. During the development of the Agency's noise regulation for buses, technology assessments were based on DOT's then current policy decision to defer institution of the Transbus Program because of high costs. However, the new Administration revived the concept, and will soon implement it, thus obliging EPA to reassess the technology available to quiet the Transbus to the already proposed regulatory levels. These studies are moving ahead, and EPA will coordinate closely with UMTA prior to final bus noise rules being issued.

#### MOTORCYCLES

Probably the most complicated noise regulation the EPA has thus far developed is the one that was recently published in the Register for new motorcycles and replacement exhaust systems. Chart 2 lists the proposed noise levels and effective dates. This is the first noise regulation EPA has had to break up significantly into parts. The reason for this complexity is that the motorcycle noise problem is not as simple or as easily addressed as other noise problems.

Unlike other current transportation noise problems, the problem of motorcycle noise is more a problem of people, or owners, than one of originally noisy equipment. Many new bike owners are under the mistaken impression that they can achieve better performance by tampering with their new bikes' muffler system. What is usually achieved is merely more noise -- not just for the rider, but for everyone else. Then there are many motorcyclists who simply desire noisier bikes than they can nowadays buy brand new. As a result, a large market has grown up over the years dealing in the manufacture and sale of replacement mufflers considerably less effective than original muffler equipment.

Will regulation solve the problem or is instead, a public education program needed? The answer is both. From a regulatory standpoint, we have devised a scheme that will hopefully limit the modification problem. Half of the regulation is a standard Section 6 rule directed at newly manufactured replacement exhaust systems. EPA is also requiring that both motorcycles and new muffler systems manufactured to be used on Federally regulated motorcycles be labeled. This labeling requirement would certify for consumers that new bikes have been quieted and should help local enforcement personnel control motorcycle noise and the

attendant modification problem in the field. Of course, much of the effectiveness of the regulation will depend on the willingness of state and local governments to control motorcycle noise from their end. In this area more than most, there is only so much the Federal Government can do. We are optimistic, however, that this rule will give state and local officials the tools they have been needing to control motorcycle noise in their communities.

I mentioned earlier that several categories of motorcycles would be regulated. The reason for this subdivision is that motorcycles are built differently to do different things. An all-encompassing standard would ignore these subtleties and could easily be unduly restrictive or lenient, depending on the type of motorcycle in question. Street motorcycles, for instance, will be required to meet a phased standard different from the moped standard and different, to some extent, from the standards off-road vehicles will be required to meet. The street motorcycle category will not be further subdivided, but the off-road category will be composed of two subclasses of bikes, the division being made on the basis of engine size.

#### LIGHT MOTOR VEHICLES

Next to medium and heavy trucks, buses, and motorcycles, which have been identified as major sources under Section 6, are automobiles and light trucks, which have not. But we're working on them and expect to make a decision soon. For much of 1977, the Agency's light motor vehicle regulatory program was located on an asphalt testing pad in Marana, Arizona, where we were endeavoring to develop a light motor vehicle noise testing procedure of our own. We undertook this project largely because existing voluntary standards did not meet our regulatory needs. The test we eventually developed differs substantially from the existing SAE J986 or ISO R362 test procedures. Ours specifies a rate of acceleration corresponding to partial throttle operation as opposed to the full throttle operation specified by existing procedures. The milder rate of acceleration is extended to be representative of the way light motor vehicles are actually operated.

In the second phase of the Marana Program, approximately 70 representative automobiles and light trucks were tested under the urban noise test developed in phase one. As discussed at NOISE-CON in October, the results of this testing have reinforced our concern about the effect that recently mandated fuel economy standards may have on noise levels in America's urban areas. Our test data show that today's four-cylinder cars are on the average 3 dBA noisier than the average eight-cylinder car. Apparently, this is a result of the smaller cars having to operate at higher engine speeds to stay abreast of the traffic flow. With fuel economy now a major factor in the marketplace, the American public is being heavily marketed to and is buying the four-cylinder engine cars in increasing numbers. We expect this effort on the vehicle manufacturers' part to be intensified in the future. Thus, four-cylinder cars may become an ever-increasing percentage of total new vehicle sales.

The test data also show that light motor vehicles equipped with diesel engines are consistently at least 5 dBA noisier during acceleration than the average gasoline engine automobiles. Because fuel-efficient diesel engine is now sold in five different passenger cars, including the 1978 GM Oldsmobile Delta 88, and the 1978 VW Rabbit, in addition to Opel, Mercedes and Peugeot, which have had diesels in limited numbers in the United States for some time. GM, Ford, and Chrysler are offering diesel engines in their 1978 model year pickup trucks.

As the data in Chart 3 show, the fuel economy and diesel engine concerns are legitimate ones. In the absence of light vehicle noise regulation, just the mere increase in light vehicle noise due to dieselization and the trend to more four-cylinders will virtually wipe out the benefits anticipated from Federal motorcycle noise control. With fairly stringent regulation of light motor vehicle noise, the expected 3 or 5 dBA degradation in diesels and four-cylinders can probably be erased and some actual noise reduction from current levels possibly achieved.

At this time EPA is preparing for the EPA Administrator a report on its light motor program to brief him on the issues involved in a decision that would be his to make within the next few months. I would hope that the automobile and light truck manufacturing industry will know EPA's verdict shortly thereafter.

#### TIRES

Another program closely related to most of our other surface transportation regulations is our tire noise program. Tires are currently being studied to determine whether they should be regulated and/or labeled.

In early October of last year EPA held an informal tire noise meeting at our light motor vehicle testing site in Arizona. The session was a chance to meet tire industry representatives and advise them of the status of our program. We described in detail the testing procedures the Agency is using and gave demonstration runs at the Marana test site for the industry representatives to observe. We also made clear to them some of the concerns we have about the possible noise levels of some tire designs now under study to meet fuel economy goals.

The next step of our tire noise program will be the publication of an initial tire noise study, which is nearing completion. We plan to give a detailed report of the results of this study later this month at NOISEXPO in Chicago. I would, though like to say a few things about the study here today that might be of interest and assistance to those of you involved in tire noise testing.

As a result of this program, several useful acoustical properties of tire noise have been measured. First, customary coast-bys in front of a single microphone at 50 feet for various speeds were conducted and the

noise levels of 19 sets of tires determined. Second, directivity patterns of these tires were calculated from coast-by through a field of eight microphones. And, finally, spectral analyses of many of the measured sounds were made.

The tire noise study also has enlightened us on some procedural questions involved in tire noise testing, such as, "how important is it to ensure that proper tire pressure inflation levels are maintained throughout testing?" and, "how long should the break-in period for new tires be to ensure that extraneous manufacturing mold marks are removed and that the tire is properly seated on the wheel rim?" These are the kinds of questions we faced early on and had to grapple with before undertaking the actual testing.

To address the tire pressure question, we tested two makes of automobiles by varying tire pressures above and below the manufacturer-prescribed "control" pressure after 10-mile warm-up runs were made. Using the control pressure as a reference point, the data in Chart 4 show that coast-by noise levels increase with increasing inflation pressure. Variations in A-weighted levels are small but noticeable and consistent. Between the highest and lowest tire pressure, the variation in sound level averaged 2 dBA for one make and 1 dBA for the other. On the basis of this information, we concluded it is essential that tire pressures be closely checked throughout testing to verify that proper levels are continuously maintained.

In order to determine the extent to which tires must be broken in to ensure that irregularities are removed, a series of tests was conducted in which the coast-by sound level was measured for a set of tires at different stages of break-in. The data presented in Chart 5 suggest that minimal tire break-in is necessary prior to performance of coast-by noise measurements. However, to ensure that tires were properly conditioned, each set of tires tested was subjected to a 50-mile (or 81-KM), break-in under actual highway driving conditions before any coast-by noise measurements were performed. EPA found this break-in distance to be more than adequate.

#### MUFFLER LABELING

Also related to all of EPA's surface transportation regulatory programs is our muffler labeling program. In mid-October of last year the Agency co-sponsored an exhaust noise symposium in Chicago to gather information on developing a noise bench test for mufflers that could be made independent of the vehicle, whether it be an automobile, motorcycle, bus, or truck. The test potentially is of great value to dealers, repair facilities, and enforcement officers, not to mention original equipment manufacturers, and, of course, EPA -- largely because it could easily be standardized and thus reduce everyone's time, trouble, and costs.

What we found from the symposium is that developing a noise bench test suitable to all parties, particularly EPA, will be a difficult task. Of the many test procedures considered, all were found by EPA to be sufficiently flawed to prevent their general use by both industry and government. It may be possible, however, to combine the best parts of several procedures and develop one master test procedure that could meet our regulatory needs and possibly the manufacturing needs of industry as well. This is what we are currently trying to determine.

Also under study by EPA are two European replacement muffler certification programs. Under both the French and German tests, new replacement mufflers must meet the required sound level of original muffler equipment or they cannot be certified or used on European-manufactured motor vehicles. European Community muffler manufacturers can take their choice of which test procedure to undergo, as only one need be passed for Community-wide certification. As with American procedures, the two European tests differ slightly. The French test utilizes an acoustical sound source while the German test is made with the muffler attached to a compatible engine.

Once these initial reviews of both domestic and European testing procedures are completed, we will move into a second phase of the program, consisting of actual testing for reliability and repeatability of combination procedures that we have developed. At the conclusion of this testing, EPA will then choose the best overall procedure and recommend it to industry for future use. If our program proceeds according to schedule, I would hope that we would be able to recommend a procedure by early summer.

#### INTERSTATE RAILROADS

I would now like to discuss EPA's Interstate Railroad Noise Program and the revision we are now writing for the standards promulgated in December 1975. But first some background. Last August, the U.S. Court of Appeals for the District of Columbia Circuit completed its review of the suit brought by the Association of American Railroads and ordered the EPA to establish much more far-reaching standards than we had originally imposed. Our existing standards for locomotives and trains were not challenged.

The Court charged that EPA interpreted its Congressional Mandate to regulate interstate carriers in a manner which best suited the Agency. The Court said EPA had no latitude to make such an interpretation because the intent of the Congress was clear -- and that is, that the railroads should and must have comprehensive Federal protection from different state and local ordinances -- not only the railroads' interstate equipment, which moves from one locale to another, but all fixed facilities and equipment as well.

We have heeded the Court's order and are moving to implement its instructions and promulgate a final regulation by the August 23, 1978, deadline. One year is very little time in which to plan what is essentially a full-scale regulatory program and see it through to completion. But this is what the Court has required us to do. It is a bit of an understatement to say that the Agency is operating under a severe time constraint with this particular regulatory program.

In order to satisfy the Court and still get a regulation published in time, the Agency is considering requiring both property line standards and some point source standards for fixed railroad equipment and facilities. Adopting property line standards is simpler than promulgating source standards, probably equally effective, and certainly more cost-effective. However, because some fixed railroad noise sources may be too noisy to ignore, given the Court's ruling, source standards may be unavoidable in some cases. Currently EPA is conducting acoustical surveys at 8 railroads around the country to better characterize railroad equipment and yard noise. These 8 are listed in Chart 6. In the next few weeks, we will have added two more railyards to our study. I might add that the Association of American Railroads and the railroad industry have been most cooperative in this effort.

The Agency is also conducting studies of the potential health and welfare benefits of further railroad noise reduction and of the best technology currently available to reduce various types of railyard noise. I should mention that we have broadened somewhat the regulatory definition of best available technology under this particular regulatory program to encompass changes in railroad operations. Thus, it may turn out that quieting railroad noise is best accomplished by moving equipment about or by shifting operating hours rather than by requiring technological changes in fixed equipment and facilities.

The bulk of these studies should be completed fairly soon. By May the Agency hopes to have published a proposed revision to the Interstate Railroad rule, leaving us several months to produce a final rule and, thus, meet the terms of the Court order.

#### SNOWMOBILES

Moving on, let me cover briefly three remaining surface transportation programs underway at EPA. First in line is our snowmobile noise study program. No decision has yet been made on whether to accord snowmobiles the major noise source status. However, the last major element of the study was recently completed -- the operator noise exposure study -- and the final decision should be made soon. Preliminary results from this study indicate that the Leq for snowmobilers without head coverings during the 2-3 hour duty cycle is about 95 dBA. Chart 7 indicates the range in testing values. The yearly Leq for 45-100 hours of operation over a three-month winter period is about 74 dBA. We have also found that helmets worn by snowmobilers can reduce noise by as much as 12 dBA or amplify it by as much as 2 dBA, depending on the type of helmet worn.

If EPA decides not to identify snowmobiles as major noise sources, the Agency will consider establishing a noise labeling program instead. The snowmobile manufacturing industry, which appears to have responded quite admirably to state and local pressure to quiet snowmobiles, already has a self-imposed labeling program, but it contains several weaknesses that a more consumer-oriented EPA program would avoid. First, because some manufacturers do not belong to the International Snowmobile Industry Association, the organization behind the self-imposed program, not all manufacturers are labeling their new products. Second, the labeling program only requires manufacturers to certify that their vehicles meet the industry's 78-dBA, new-product standard; it does not require manufacturers to list the new products' actual decibel levels. An EPA program would go this one step further and require sound levels to be included on the labels. Since approximately 25 percent of the new snowmobiles on the market surpass the 78 dBA standard, such comparative information could be a great boon to noise-conscious consumers and to state and local governments interested in controlling snowmobile noise once the vehicles are off the showroom floor and on the snow. Some could even construe the industry labeling program as a "restraint of trade" mechanism to remove noise reduction as a competitive element in the snowmobile manufacturing industry.

#### MOTORBOATS

The EPA's noise program for motorboats has just recently begun. Preliminary studies were initiated four months ago to provide us with the necessary information to determine whether motorboats should be identified and, hence, whether we should commence a full-scale regulatory program.

#### GUIDED MASS TRANSIT

Virtually the same can be said for the Agency's Guided Mass Transit program. Studies are underway and no decisions have been made about the program's future.

CHART 1

# LIMITED PRODUCTION VERIFICATION RESULTS FROM TRUCK MANUFACTURERS

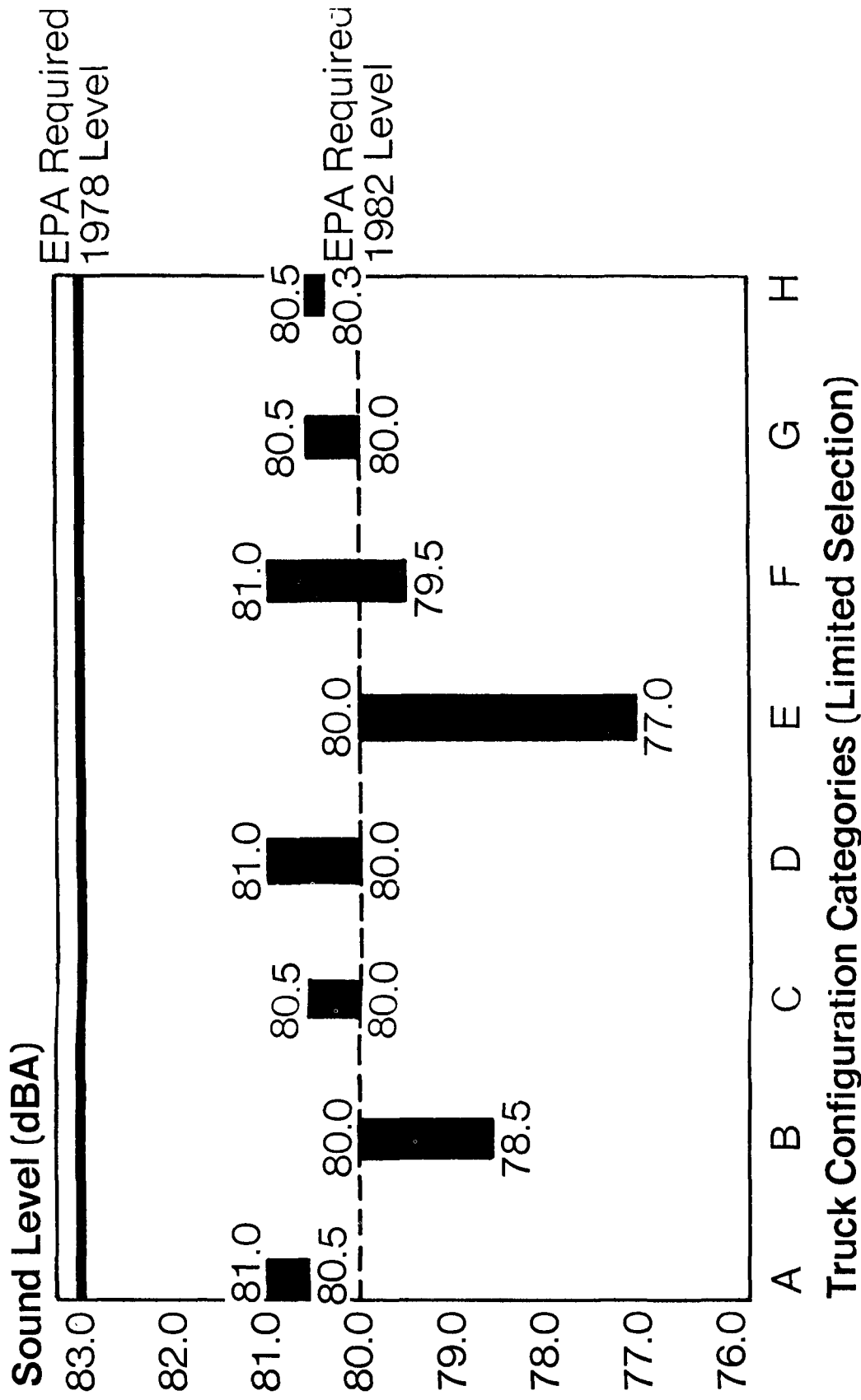


CHART 2

**OFF-ROAD MOTORCYCLES:  
DISPLACEMENT 170 cc AND BELOW**

<u>EFFECTIVE DATES</u>	<u>SOUND LEVEL (dBA)</u>
JANUARY 1, 1979	83
JANUARY 1, 1981	80
JANUARY 1, 1984	78

**OFF-ROAD MOTORCYCLES:  
DISPLACEMENT OVER 170 cc**

<u>EFFECTIVE DATES</u>	<u>SOUND LEVEL (dBA)</u>
JANUARY 1, 1979	86
JANUARY 1, 1982	82

CHART 3

## SPECIFIC NOISE LEVELS FOR LIGHT VEHICLES

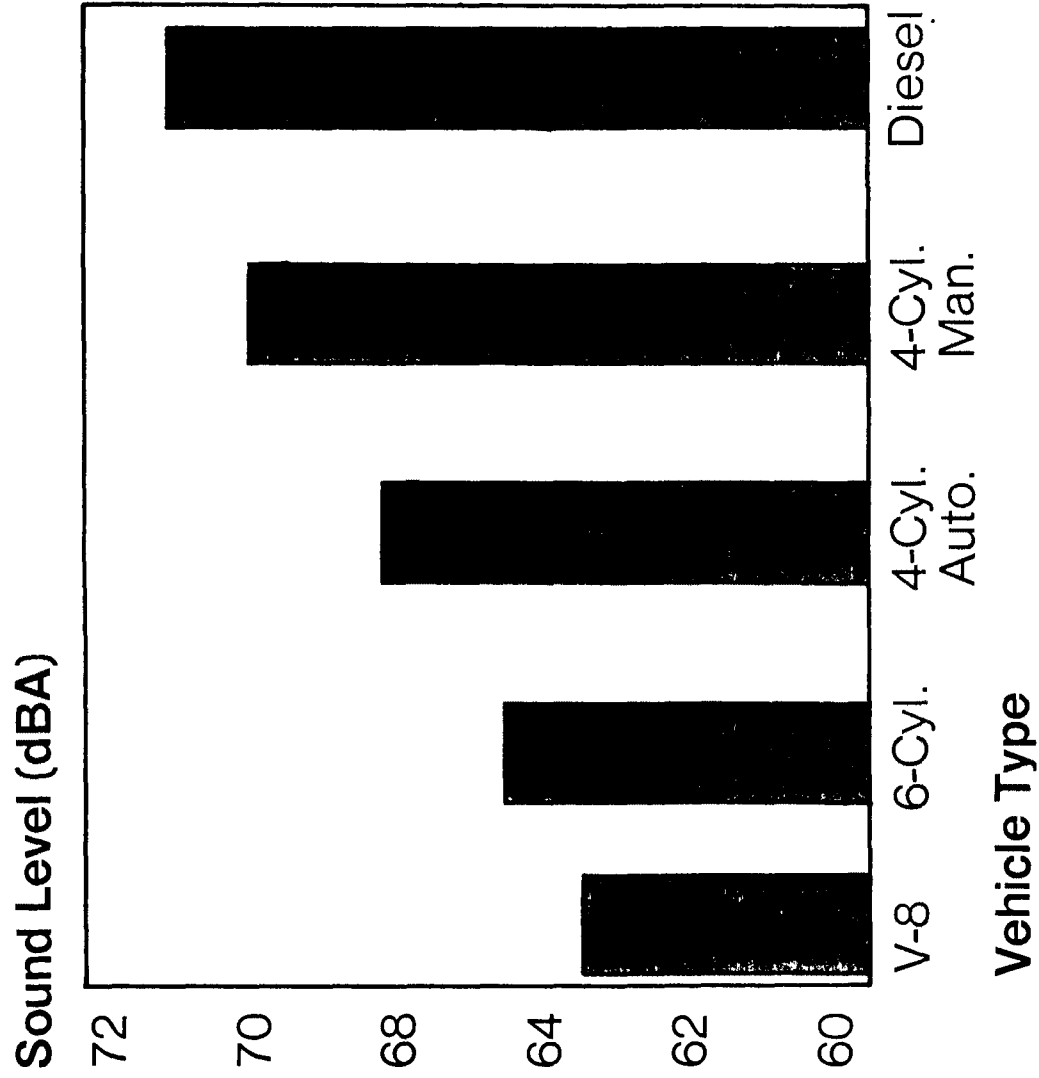


CHART 4

## TIRE NOISE AND TIRE PRESSURE

Exterior Coastby Sound Level, dB re 20 Pa

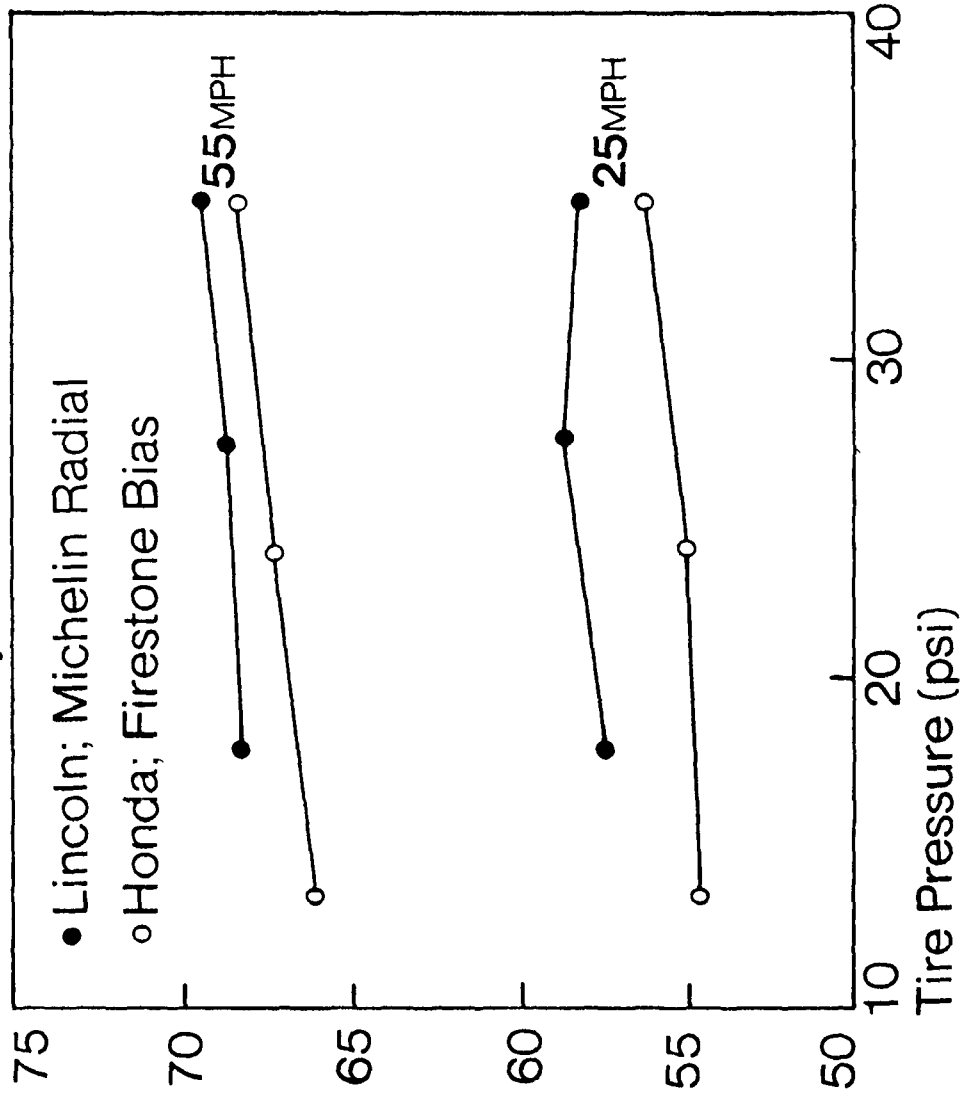
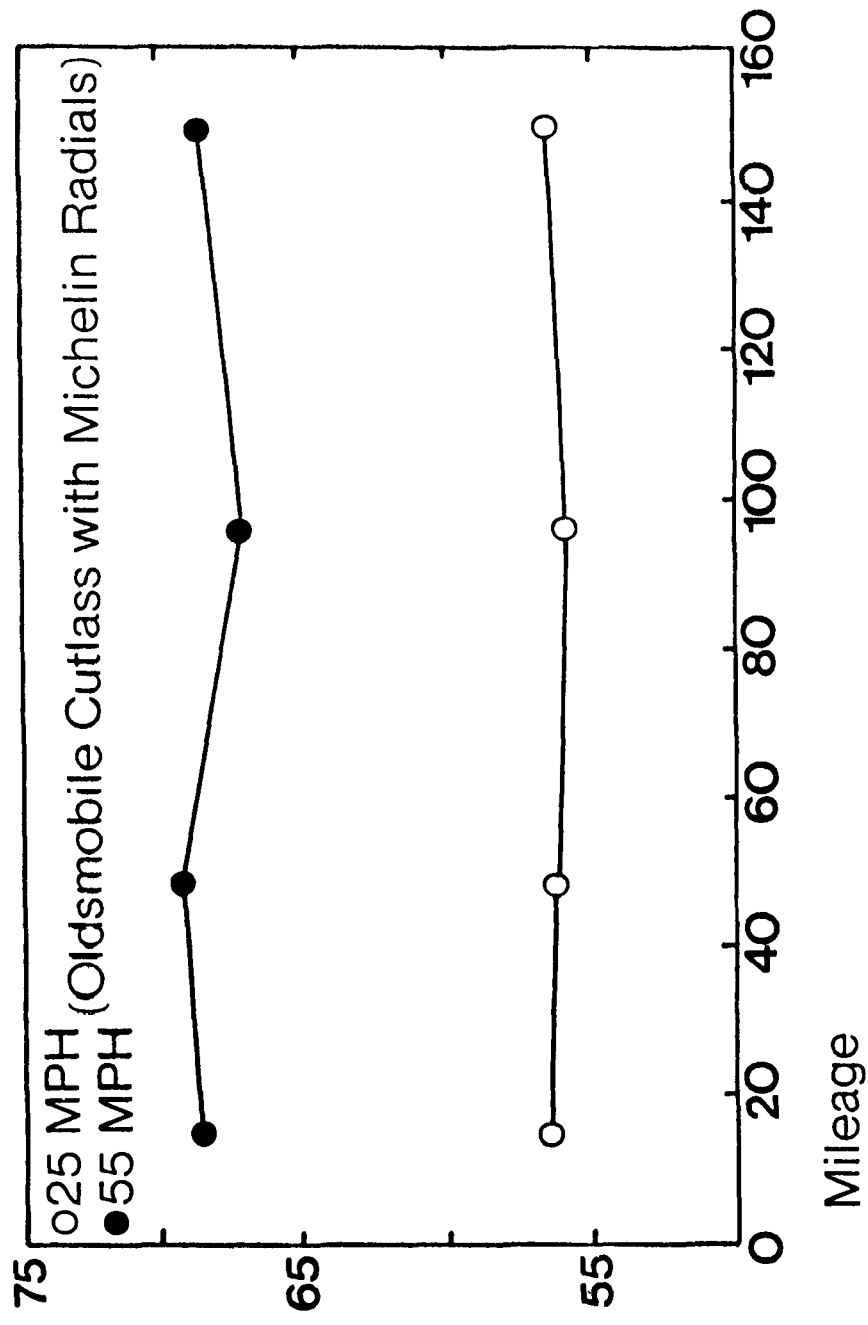


CHART 5

## TIRE NOISE AND BREAK-IN MILEAGE

Exterior Coastby Sound Level (Measured at 50 ft. (15.2 M))



## CHART 6

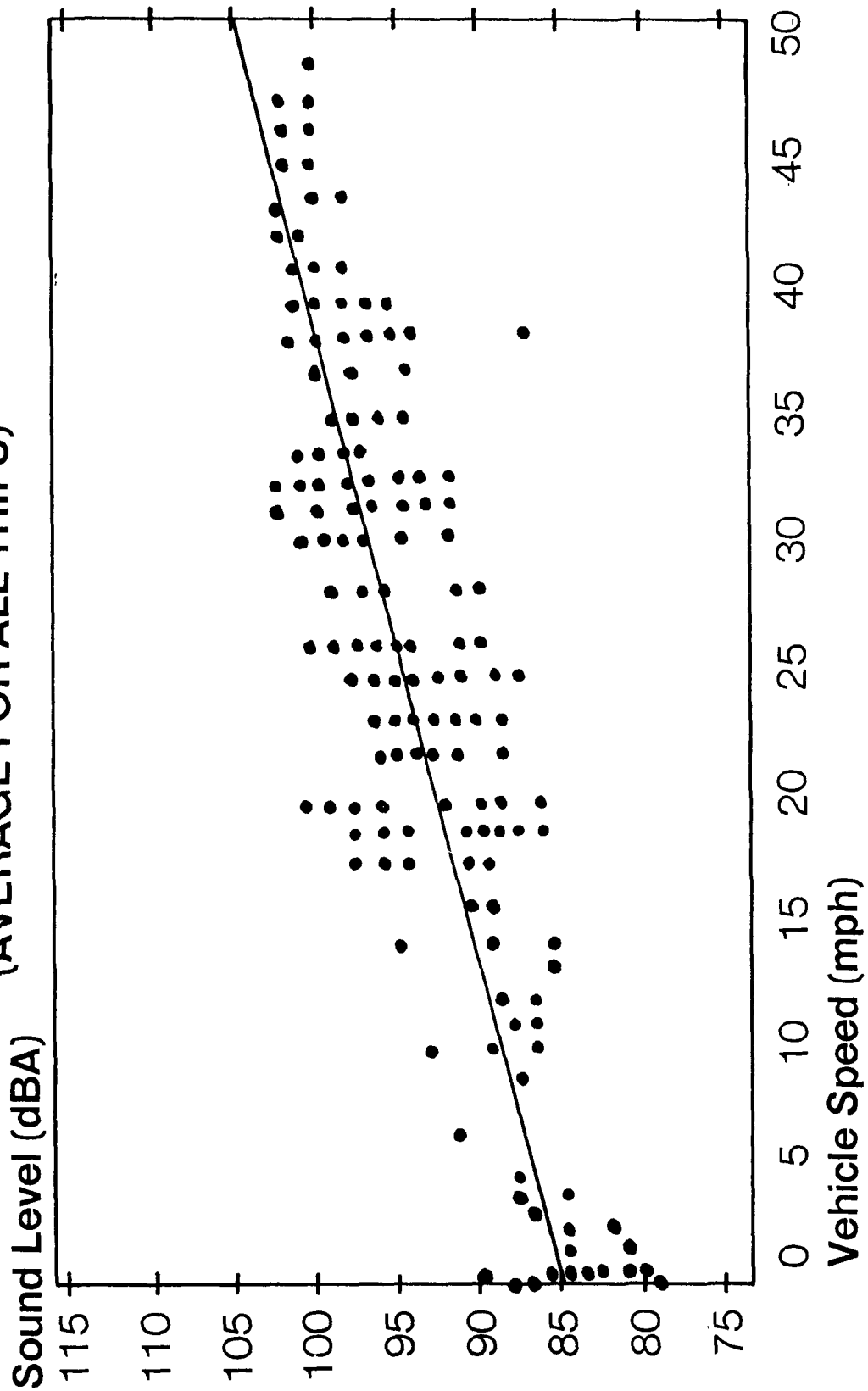
### RAIL YARDS MEASURED TO DATE

<u>YARD LOCATIONS</u>	<u>RR</u>	<u>DESCRIPTION</u>
ROSEVILLE, CA	SP	OLD LARGE HUMP YARD
RICHMOND, CA	ATSF	BUSY FLAT YARD
BARSTOW, CA	ATSF	LARGE AUTOMATED HUMP YARD
MACON, GA	SR	MEDIUM HUMP YARD
SAVANNAH, GA	SR	NEW AUTOMATED FLAT YARD
NEW ORLEANS, LA	ICG	LARGE FLAT YARD
HOUSTON, TX	MP	MEDIUM FLAT YARD
MEMPHIS, TN	ICG	CROWDED FLAT YARD

CHART 7

# SNOWMOBILE TRAIL RIDE NOISE DATA

(AVERAGE FOR ALL TRIPS)



AW-490  
United States  
Environmental Protection Agency  
Washington, D. C. 20460

Official Business  
Penalty For Private Use \$300  
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U S ENVIRONMENTAL PROTECTION AGENCY  
EPA-335

