The original documents are located in Box 4, folder "Clean Air Act Amendments (1)" of the Loen and Leppert Files at the Gerald R. Ford Presidential Library.

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STATEMENT BY THE PRESIDENT

Earlier this year, I submitted to the Congress my proposed Energy Independence Act of 1975. In that comprehensive proposal, I recommended that the Congress modify provisions of the Clean Air Act of 1970 related to automobile emissions. I proposed strict emission controls that would still permit America to achieve a high-priority energy goal -- a 40 percent improvement in automobile fuel efficiency within four years.

Since that time, I have received information concerning potential health hazards from certain automobile pollution control devices first used on 1975 cars. In response to this information, I ordered an executive branch review of the problem and asked the appropriate officials to consider the various impacts of a range of emission alternatives as they relate to public health, energy goals, consumer prices and environmental objectives.

This review has now been completed. We have carefully surveyed this matter with many scientists and other qualified authorities. Although there is some disagreement on the data and conclusions, there is general accord that it is impossible to accurately predict the adverse impacts likely to result if we move to stricter automobile pollution standards now. Most of the experts agree that tighter emission controls will limit the fuel economy potential of our cars, and all agree that they will increase costs to the consumer.

As the automobile manufacturers have responded to Federal requirements to remove pollutants from automobile exhaust, other unregulated pollutants with potentially serious health implications have been produced. The same devices designed to control some emissions may result in the creation or aggravation of other pollutants. The result of government-mandated changes to our automobiles could actually increase prices, without substantial environmental benefits but with possible new risk to the Nation's health.

As a result of actions already taken, the automobile is rapidly becoming less of a contributor to air pollution. A major part of our task is behind us. But it was the easiest part. We have now reached the point where the further incremental progress we all want can only be achieved slowly and at higher cost.

I, therefore, urge the Congress to consider how uncoordinated Federal laws mandating automobile fuel efficiency and emission control might work against each other, and how they will effect other national objectives such as public health and a strong economy.

In view of these considerations, I have decided to revise my Administration's position proposed in the Energy Independence Act. We simply cannot afford to be wrong on such serious policies. I have concluded that we should maintain the current automobile emission standards through model year 1981. This will enable us to achieve the following objectives:

. <u>Health</u>. Avoid increasing the potential adverse health impacts of certain automobile emission devices by retaining current controls on known health hazards, such as carbon monoxide and hydrocarbons, without the risk of increasing other imperfectly understood but potentially dangerous pollutants such as sulfuric acid.

- . <u>Energy</u>. Achieve an increase of 40 percent or greater in automobile fuel efficiency by 1980.
- Environment. Achieve almost all the environmental objectives we would have achieved by going to stricter standards.
- Economy. Minimize the inflationary impact of Federal regulations on the cost of automobiles to consumers. Avoid aggravating unemployment, especially in the automobile industry.

I recognize that this position modifies the auto emission standards contained in my proposed Energy Independence Act of 1975 which I transmitted to the Congress on January 30. However, as pointed out in recent testimony during Congressional hearings, the Administrator of the Environmental Protection Agency has already noted that it is necessary to adjust the strict emission standards that I proposed. Administrator Train held hearings which considered the problem of sulfuric acid mist emitted from cars equipped with catalytic converters. Most new cars are equipped with the converter to meet current emission standards. The Administrator concluded that this is a potentially serious health hazard. The Secretary of Health, Education, and Welfare agrees.

Evidence brought out at the EPA hearings and by other Government reports, shows that current catalytic converters do not emit enough sulfuric acid to constitute any immediate danger. However, if the auto emission standards are further lowered, as would be required if no change is made in the current law, then changes in the catalytic converter control system would be mandatory. This could produce substantially more sulfuric acid. This poses a health risk which my advisers believe we should not accept.

The Nation needs long-term automobile fuel efficiency and emission control policies so that we can begin to build cars meeting responsible energy and environmental standards.

By replacing the current fleet with new cars offering more fuel efficiency while generating less pollution, we will make substantial progress toward our goals of better fuel efficiency, economic recovery and a healthier environment.

I deplore the delay in resolving the conflict between Federal energy and environmental policies and laws. Such delays will only contribute to further economic disruption and continuing unacceptable levels of unemployment. Lack of a comprehensive and balanced policy would allow one objective to go forward at the expense of other critical national goals.

It may be that additional Government standards will be required in future years. This is something which EPA and other Government agencies will work on in cooperation with the appropriate committees of Congress.

Today we cannot shirk our responsibility to make decisions that establish realistic ground rules. We cannot afford to ignore the sulfuric acid problem. But our response must be more than simply another Government decree that sets another standard that could create another problem. We have a positive obligation to ensure that the steps we take today do not aggravate potentially serious health hazards.

Other technical information was brought to my attention as I reached my automobile emissions decision. In addition to a statement of facts, which I am making public today, I have asked my advisers to consult with the appropriate members of the Congress, particularly the committees now considering legislation in this field. They will be available to discuss these complex and interrelated issues and to provide all the detailed information available to the executive branch.

I urge the Congress to carefully consider all the issues involved in the potential conflict that one national objective -- clean air -- might have on our efforts to reach other national goals.

March 7, 1975

MEMORANDUM FOR:

GLENN SCHLEEDE

THRU:

MAX FRIEDERSDORF VERN LOEN

FROM:

CHARLES LEPPERT, JR.

SUBJECT:

Alternative Amendments to the Clean Air Act

Attached for your information is the bill now being prepared for introduction on the Hill as alternative amendments to the Clean Air Act to those proposed by the Administration in H.R. 2650, Title V, the "Energy Independence Act of 1975."

Attachment: Bill

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R. FOR

Mr.

A BILL

To amend the Clean Air Act to provide a postponement of certain automobile emission standards and to provide for certain related studies and reports, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Postponement of Emissions Standards

Section 1. (a) Section 202(b)(1)(A) of the Clean Air Act (42 U.S.C. 1857f-1) is amended by striking out "and 1976" and inserting in lieu thereof "through 1981" and by striking out "1977" and inserting in lieu thereof "1982". (b) Section 202(b)(1)(B) of such Act is amended by striking out the second sentence thereof, by striking out "and 1976" and inserting in lieu thereof "through 1981", and by striking out "1978" and inserting in lieu thereof "1982".

Study

Sec. 2. The appropriate agencies of the executive branch, as designated by the President, shall conduct a study to determine--

(1) the incremental public health and welfare effects that would result from new motor vehicle and new motor vehicle engine emission control standards for hydrocarbons, carbon monoxide, and oxides of nitrogen which are more stringent than the standards applicable under section 202 of the Clean Air Act for the 1975 model year, and

(2) the implications of implementing such standards, including technological feasibility, lead-time requirements, energy consumption and material utilization, manufacturer and consumer cost effects, and social, economic, and employment impacts on the automotive industry and the nation. 1. A. A.

In accordance with the findings of such study, the President shall report to Congress, not later than twelve months after the date of enactment of this Act, the findings and recommendations of such agencies with respect to emission control standards for hydrocarbons, carbon monoxide and oxides of nitrogen for new motor vehicles and new motor vehicle engines manufactured subsequent to the 1981 model year.

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Review, Report, and Recommendations Sec. 3. The Administrator of the Environmental Protection Agency shall, by June 30 of 1976 and of each year thereafter--

(1) review the rate of development in motor vehicle emissions control technology and fuel economy improvement by the automotive industry and the industrial and scientific community,

(2) report to Congress his findings with respect to both the rate of such technological development and the adequacy of developmental efforts by the automotive industry, and

(3) recommend to Congress any amendments to the Clean Air Act that are warranted by technological developments which enable the achievement of substantially more stringent automotive emission control levels without the imposition of significant fuel economy or cost penalties.

THE WHITE HOUSE

WASHINGTON

April 10, 1975

MEMORANDUM FOR:

THRU:

VERN LOEN 1/L

MAX FRIEDERSDORF

FROM:

SUBJECT:

Clean Air Act Amendments

CHARLES LEPPERT, JR. 44.

Spoke with Rep. Tim Lee Carter (R-Kty) today on the status of the Clean Air Act Amentments legislation.

Carter reports the Subcommittee has been obtaining information for the purpose of writing a bill and the staff has been directed to draft such legislation.

Dr. Carter was asked that in addition to the information provided by EPA, that FEA be specifically requested to provide information and assistance in writing the bill. Dr. Carter mentioned that the office of General Counsel at FEA had been in discussions with him on this matter.

cc: Doug Bennett Glenn Schleede

THE WHITE HOUSE

WASHINGTON

May 12, 1975

MEMORANDUM FOR:

THRU:

JAMES CANNON

MAX L. FRIEDERSDORF VERNON C. LOEN

FROM:

SUBJECT:

CHARLES LEPPERT, JR. Clean Air Act Amendments

On Wednesday, May 7, 1975, I spoke with Subcommittee Chairman Paul Rogers (D-Fla.), the Ranking Minority Member Rep. Tim Lee Carter (R-Ky), and staff concerning an opportunity for the Administration to present additional information to the Subcommittee on amendments to the Clean Air Act and specifically on the sulfate problem and auto emissions.

The consensus was that the information should be sent in a letter to the Subcommittee Chairman and a copy to all Members of the Subcommittee as soon as possible since it was expected that the Subcommittee would begin writing a bill the week of May 12th. In addition, it was suggested that on the same day the letter is sent to the Subcommittee Chairman that a briefing for the Subcommittee minority members be set up to explain the information being presented in the letter.

cc: Mike Duval

EMBARGOED FOR RELEASE UNTIL 12:00 NOON (EDT)

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FICE June 27, 1975

Office of the White House Press Secretary

THE WHITE HOUSE

STATEMENT BY THE PRESIDENT

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Since that time, I have received information concerning potential health hazards from certain automobile pollution control devices first used on 1975 cars. In response to this information, I ordered an executive branch review of the problem and asked the appropriate officials to consider the various impacts of a range of emission alternatives as they relate to public health, energy goals, consumer prices and environmental objectives.

This review has now been completed. We have carefully surveyed this matter with many scientists and other qualified authorities. Although there is some disagreement on the data and conclusions, there is general accord that it is impossible to accurately predict the adverse impacts likely to result if we move to stricter automobile pollution standards now. Most of the experts agree that tighter emission controls will limit the fuel economy potential of our cars, and all agree that they will increase costs to the consumer.

As the automobile manufacturers have responded to Federal requirements to remove pollutants from automobile exhaust, other unregulated pollutants with potentially serious health implications have been produced. The same devices designed to control some emissions may result in the creation or aggravation of other pollutants. The result of government-mandated changes to our automobiles could actually increase prices, without substantial environmental benefits but with possible new risk to the Nation's health.

As a result of actions already taken, the automobile is rapidly becoming less of a contributor to air pollution. A major part of our task is behind us. But it was the easiest part. We have now reached the point where the further incremental progress we all want can only be achieved slowly and at higher cost.

I, therefore, urge the Congress to consider how uncoordinated Federal laws mandating automobile fuel efficiency and emission control might work against each other, and how they will effect other national objectives such as public health and a strong economy. In view of these considerations, I have decided to revise my Administration's position proposed in the Energy Independence Act. We simply cannot afford to be wrong on such serious policies. I have concluded that we should maintain the current automobile emission standards through model year 198¹. This will enable us to achieve the following objectives:

- <u>Health</u>. Avoid increasing the potential adverse health impacts of certain automobile emission devices by retaining current controls on known health hazards, such as carbon monoxide and hydrocarbons, without the risk of increasing other imperfectly understood but potentially dangerous pollutants such as sulfuric acid.
- Energy. Achieve an increase of 40 percent or greater in automobile fuel efficiency by 1980.
- Environment. Achieve almost all the environmental objectives we would have achieved by going to stricter standards.
- Economy. Minimize the inflationary impact of Federal regulations on the cost of automobiles to consumers. Avoid aggravating unemployment, especially in the automobile industry.

I recognize that this position modifies the auto emission standards contained in my proposed Energy Independence Act of 1975 which I transmitted to the Congress on January 30. However, as pointed out in recent testimony during Congressional hearings, the Administrator of the Environmental Protection Agency has already noted that it is necessary to adjust the strict emission standards that I proposed. Administrator Train held hearings which considered the problem of sulfuric acid mist emitted from cars equipped with catalytic converters. Most new cars are equipped with the converter to meet current emission standards. The Administrator concluded that this is a potentially serious health hazard. The Secretary of Health, Education, and Welfare agrees.

Evidence brought out at the EPA hearings and by other Government reports, shows that current catalytic converters do not emit enough sulfuric acid to constitute any immediate danger. However, if the auto emission standards are further lowered, as would be required if no change is made in the current law, then changes in the catalytic converter control system would be mandatory. This could produce substantially more sulfuric acid. This poses a health risk which my advisers believe we should not accept.

The Nation needs long-term automobile fuel efficiency and emission control policies so that we can begin to build cars meeting responsible energy and environmental standards. By replacing the current fleet with new cars offering more fuel efficiency while generating less pollution, we will make substantial progress toward our goals of better fuel efficiency, economic recovery and a healthier environment.

more

I deplore the delay in resolving the conflict between Federal energy and environmental policies and laws. Such delays will only contribute to further economic disruption and continuing unacceptable levels of unemployment. Lack of a comprehensive and balanced policy would allow one objective to go forward at the expense of other critical national goals.

It may be that additional Government standards will be required in future years. This is something which EPA and other Government agencies will work on in cooperation with the appropriate committees of Congress.

Today we cannot shirk our responsibility to make decisions that establish realistic ground rules. We cannot afford to ignore the sulfuric acid problem. But our response must be more than simply another Government decree that sets another standard that could create another problem. We have a positive obligation to ensure that the steps we take today do not aggravate potentially serious health hazards.

Other technical information was brought to my attention as I reached my automobile emissions decision. In addition to a statement of facts, which I am making public today, I have asked my advisers to consult with the appropriate members of the Congress, particularly the committees now considering legislation in this field. They will be available to discuss these complex and interrelated issues and to provide all the detailed information available to the executive branch.

I urge the Congress to carefully consider all the issues involved in the potential conflict that one national objective -- clean air -- might have on our efforts to reach other national goals.

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EMBARGOED FOR RELEASE UNTIL 12 NOON, EDT

ENERGY RESOURCES COUNCIL MEMORANDUM

Congress should amend the Clean Air Act by extending the current automobile emission standards from 1977 until 1981.

While this action will have no significant impact on our attempt to achieve the objectives of the Clean Air Act, the proposed modifications are necessary to (1) avoid certain recently recognized potential health risks associated with the catalytic converter and (2) permit substantially greater fuel efficiencies over the next five years. All of the enforcement, certification and inspection measures contained in the Clear Air Act will be retained.

Background

This proposal supersedes Section 503, Title V, of the President's Energy Independence Act of 1975 which he sent to Congress on January 30, 1975. At that time, the President proposed emission standards based on a modification of the current California standards.

After submitting the Energy Independence Act to the Congress, the Environmental Protection Agency held public hearings on the manufacturers' requests for a suspension of the 1977 auto emission standards and also took testimony related to fiveyear emission levels. The hearings established that the catalytic converter, used to meet the HC and CO standards for 1975 and 1976 model year vehicles, produces sulfuric acid in amounts that can pose a significant public health risk.

In addition, because of the technology likely to be used to achieve these tighter standards, automobile emissions of sulfuric acid may double if the more stringent HC and CO standards proposed in the Energy Independence Act are imposed for 1977 and subsequent years.

Accordingly, the President directed an interagency task force to undertake a major review of the public health, energy and consumer cost implications of several widely discussed levels of automobile emission standards.

The President's decision is based upon this review. Some of the more significant considerations which led to the President's recommendation are contained in his statement released today.

Additional information on those considerations is outlined below.

The Interagency Review

The review by Executive Branch agencies considered the implications of a range of alternative automobile emission requirements which might be applied to 1977 through 1981 model automobiles. Specifically, the following standards, applicable to hydrocarbons (HC), carbon monoxide (CO) and oxides of nitrogen (NOX) emissions have been considered:

	Emissions	in grams per	mile
	HC	<u>co</u>	NOX
Retain statutory standards which will apply to 1978 models	0.41	3.4	0.4
Energy Independence Act proposal covering 1977-81 models	0.9	9.0	3.1
EPA's March 5 conclusions - for 1977-79 models - for 1980-81 models	1.5 .9	15.0 9.0	2.0
Continue standards applicable to 1975-76 models for 1977-81	`1. 5	15.0	3.1
Adopt Canadian 1975-76 standards for 1977-81 models	2.0	25.0	3.1
Reimpose standards applicable to 1973-74 models for 1977-81	3.0	28.0	3.1

Based upon this review, the following conclusions were reached:

- 1. Controls on automobiles necessary to meet the current standards have reduced ambient concentration levels in those areas that have auto-related HC and CO problems; and have reduced the rate at which NOX concentrations have increased.
- 2. Through the year 1985, tighter or looser standards for HC, CO and NOX, in the range being considered, will make little difference in the air quality in those areas that have an auto-related pollution problem, although many parts of the country have no auto-related pollution problem.
- 3. Present data are not sufficient to make specific calculations or final judgments on what sulfuric acid emission levels would be safe from a public health perspective. However, it is believed that sulfuric acid emissions could prove to be a significant public health risk and that emissions could increase substantially if standards more stringent than the 1975 interim standards are adopted.
- 4. Further mandated reductions in emissions from internal combustion engines may have the effect of increasing or creating pollutants other than CO, HC and NOX.
- 5. Auto emission standards have had an impact on fuel economy and, therefore, on our nation's total petroleum demands and reliance on foreign sources. Standards tighter than the 1975 interim will result in higher initial car costs and higher operating costs.
- 6. The basic philosophy and approach to future auto emission controls need to be reconsidered in light of current conditions.
 - (a) Significantly tighter standards at this time may preclude continued development of some promising fuel efficient and low emission technologies.
 - (b) Actions to reduce auto emissions must take into account other sources of the same pollutant.

7. Prompt Congressional action is needed on auto emission standards in order to establish a five-year emission program which is compatible with a strict fuel efficiency program.

DISCUSSION

- 1. Controls on automobiles necessary to meet the current standards have reduced ambient concentration levels in those areas that have auto-related HC and CO problems; and have reduced the rate at which NOX concentrations have increased.
- 2. Many populated areas of the country have no auto-related pollution problem. Through the year 1985, tighter or looser standards for HC, CO and NOX in the range being considered, will make little difference in the air quality in those areas that have an auto-related pollution problem.

The Clean Air Act has imposed increasingly more stringent automobile emission limitations. 1973-74 vehicles produce about 65 percent less HC and CO than uncontrolled (pre-1968) vehicles. 1975 vehicles, meeting the current standards, produce 83 percent less HC and CO and 11 percent less NOX than uncontrolled vehicles. The existing law, however, requires that these automobile emissions be reduced even further beginning with model year 1977 for NOX and model year 1978 for HC and CO.

The attached tables show the direction and magnitude of change in ambient concentration levels for HC, CO and NOX which would result from adopting standards which are less (or more) stringent than those proposed in the Energy Independence Act. The ambient standards are used as criteria because they are the healthrelated pollutant limits in each air quality region, toward which reductions in both automobile and stationary emissions contribute. Thus the levels shown are the result of mobile and stationary source emissions. Three points should be noted:

- First, though the tables assume that the statutory standards will be in force after the 1981 model year, if any of the options were kept through model year 1990, the concentration levels for each region would change very little and the conclusions reached remain basically the same.
- Second, because the concentration levels are projected through modeling techniques marginal changes in the concentration levels, whether increases or decreases, are often within the range of statistical error.
- Third, the estimates of total auto pollution emitted are based on historical growth rates for vehicles miles traveled and auto fuel economy. No compensation has been made for the higher cost of gasoline which already affected total pollutants through reductions in vehicle miles traveled.

Hydrocarbons

Out of the thirty regions considered to have an HC problem, twenty are projected to exceed the ambient standard in 1985, regardless of the automobile emission level chosen. More importantly, all of the regions projected to have concentration levels below the ambient standard in 1985 at the statutory vehicle limitation level are also projected to be below the ambient standard if any of the other less stringent automobile emission standards shown is chosen instead.

Only 25 percent of total hydrocarbon emissions are generated by automobile exhaust. Therefore, hydrocarbon ambient air concentrations tend to be much less sensitive than carbon monoxide to the level of vehicle emission control.

Attachment 1 shows the limited differential impact that vehicle hydrocarbon limitations more stringent than the 1975 (Interim) standard would have on ambient air quality by 1985 in those areas considered to have a hydrocarbon problem. The measure of air quality is photochemical oxidants to which hydrocarbons are converted and in which form HC most adversely affects air quality.

Carbon Monoxide

Carbon monoxide levels in the atmosphere are much more sensitive to changes in automobile emission controls than either HC or NOX. Unlike those pollutants, the growth of stationary sources over the next ten years will have little effect on CO air quality.

Attachment 2 shows 1985 projected concentration levels for twentysix problem regions for each of the alternatives presented. The most important conclusion is that air quality is improving rapidly and will continue to improve until 1985 under all of the emission control options presented. This is because older uncontrolled cars are being replaced by newer controlled cars. The regions with asterisks are those which would still exceed the <u>ambient</u> standard if an automobile CO standard were adopted that was less stringent than either the statutory standard or the one proposed in the Energy Independence Act.

First, there is only a limited difference in ambient concentration levels for all of the standards presented, but the difference is particularly small when comparing the statutory standard (3.4 grams/mile) with either the Energy Independence Act proposal (9.0 grams/mile), EPA's recommended standard (15 grams/mile until 1979 and 9.0 grams/mile from 1979 to 1981), or the current standard (15 grams/mile) extended until 1981. By 1985, the average ambient levels for this pollutant will have been reduced about 70 percent below 1970 levels regardless of which option is chosen.

Second, the choice of option will not significantly affect any single area's ability to achieve or maintain the ambient standard by 1985. When comparing all the alternatives (except the 1974 or Canadian Standards), those areas below the ambient standard in 1985 will be below it regardless of the automobile emission standard chosen, with the sole exception of Denver. The adoption of the Canadian Standard would mean that only two additional areas (Portland, Oregon and Puget Sound) would still be above the ambient standard in 1985 by a marginal amount.

Nitrogen Oxides

Federal government and independent scientists predict that a steady increase in ambient nitrogen dioxide concentrations will occur in metropolitan areas over the next ten years regardless of the auto emission limit chosen. This is because stationary sources emit most NOX pollution and the technology for controlling stationary sources is very limited. Attachment 3 (b) shows the average percentage increases in NO2 ambient concentration levels that will occur for each of the auto emission alternatives studied (3.1, 2.0 and 0.4 grams/mile) under varying assumptions about the auto standard after 1981.

When comparing the 2.0 and 3.1 auto emission alternatives, Attachment 3 (B) shows that as long as the 2.0 NOX standard were implemented after 1981, no significant difference in the predicted increases of NO2 concentration levels would occur in either 1980 or 1985, as a result of maintaining the 3.1 grams/mile standard through the 1981 model year (columns 2 and 3).

Though the statutory standard would have a significant effect on the overall predicted increase, the differential effect of a more stringent automobile standard than currently in force on the ambient concentration levels in those areas with nitrogen dioxide problems is much less pronounced. This is shown in Attachment 3 (a), which displays ambient projected concentration levels in the ten problem areas for 1985 under various automobile emission standards.

With the exception of San Francisco, by 1985 all ten regions are predicted to have concentration levels above the ambient standard if either the 3.1 or 2.0 grams per mile limitation is placed on automobiles through the year 1980 (columns 1 and 3). San Francisco would remain below the standard if the more stringent emission limitation is adopted and, in fact, California has the more stringent limitation in force as a State regulation.

It should also be noted that regardless of whether the 3.1 or the 2.0 limitation is imposed through 1981, and even if the statutory standard (.4) is imposed after 1981, only one additional region (Phoenix) would be brought into compliance with the ambient standard (columns 4 and 5). In fact, implementing the statutory standard in 1978 would result in only two additional areas (Phoenix and Baltimore) meeting the standard (column 6).

It is, therefore, clear that the projected increases in nitrogen dioxide cannot be stopped without major technological innovations in stationary source control. Therefore, regardless of how stringent the automobile standard, the future concentration levels in major metropolitan areas will primarily be a function of stationary source emissions.

3. With present data experts generally agree that standards which are tighter or looser than those currently in force would have minimal differential health impacts -- especially for HC and CO. However, present data are not sufficient to make specific calculations or final judgments on what sulfuric acid emission levels would be safe from a public health perspective. It is only known that sulfuric acid emissions could prove to be a significant public health risk and that emissions would increase if standards more stringent than the 1975 interim standards are adopted. 4. Further mandated reductions in emissions from internal combustion engines may have the effect of increasing existing pollutants or creating other pollutants.

Health Impacts:

Based upon existing air quality data, there are no measurable health risks associated with the application of HC and CO emission standards (within the range of options presented) which are less stringent than those in the Energy Independence Act or the statutory standards.

The application of the 3.1 NOX level will not greatly increase health risks nationwide. With an ambient air quality standard of 100 ug/m3 health data suggests that the level at which people would have an increased risk for excess respiratory disease is 200 ug/m3. Los Angeles is the only area which is expected to approach the 200 ug/m3 level by 1985, and California has the lower 2.0 grams/mile level in effect as a State regulation.

Sulfuric Acid:

Though ambient carbon monoxide and hydrocarbon concentration levels are not significantly affected by the range of automobile emission standards presented, the concentrations of sulfuric acid are affected.

Gasoline contains sulfur which, after combustion, is released as sulfur dioxide. In the process of removing other pollutants the catalytic converter changes some of the sulfur dioxide into sulfuric acid mist.

Current estimates indicate that with existing automobile emission technology, emission standards for hydrocarbons and carbon monoxide of .9 and 9.0, will require the use of airinjected oxidation catalysts. This catalyst results in a substantial increase of sulfuric acid emissions. Though there are several catalytic and non-catalytic technologies which can potentially meet the stricter HC, CO and NOX emission limitation without significant sulfuric acid emissions, there is little production potential for using these systems in the near term. (See discussion below).

While all scientists agree that sulfuric acid is a toxic and potentially dangerous pollutant, there is still disagreement on the quantities of emissions needed to pose a health risk and on how long it would take for the buildup in concentration levels to occur.

Major studies by government and industry have already begun in order to resolve some of these uncertainties. Much of the unknown about sulfuric acid results from our current inability to precisely measure how much sulfuric acid is being emitted by vehicles and our inability to precisely measure how much emitted sulfuric acid is being concentrated in the breathing zone.

To improve vehicle measurements, EPA is developing a new test driving cycle which will more accurately reflect emission of sulfuric acid and is jointly working with private industries on the relationship of catalysts and other control options to sulfuric acid. To improve our knowledge of the disposition of sulfuric acid once emitted into the air, EPA has instituted a long run trend study on one major highway and has jointed with State government agencies to measure roadside concentrations on other highways as well. EPA is also working with the State agencies to determine the change in sulfuric acid emissions as catalyst equipped vehicles age and accumulate mileage.

Until these and other studies are completed no final judgments on the potential health impacts of sulfuric acid emissions can be made. However, recent information presented in EPA's "Estimated Public Health Impact as a Result of Equipping Light Duty Motor Vehicles With Oxidation Catalysts" (January 30, 1975) suggested the following estimates of the years in which sulfuric acid emission levels from automobiles could pose a serious threat to public health.

	Model Year <u>1</u> / Sulfuric Acid co a serious health	could pose			
Standard	Average Meteorological Conditions	Adverse Meteorological Conditions 2/			
1975 Interim Standards	1981	1979			
1975 California Standards					
In 49 States In California <u>3</u> /	1979 1978	1977 1977			

- 1/ The data assumes that there are no emissions of sulfates from stationary sources, and that 70 percent and 90 percent of the fleet in 1975 and 1976 respectively will utilize catalysts.
- 2/ Adverse meteorological conditions would occur in large metropolitan areas on an average of 6-7 days a year.
- 3/ The dates for reaching a critical problem are earlier in California than the remaining 49 States because California utilizes higher sulfur gasoline.

In interpreting the preceding table the following factors should be noted. Data available to date do not take into account "background" emissions of sulfates from stationary sources, e.g., coal-fired generating plants. Therefore, the table represents only the potential health effects of emissions from mobile sources. The extent to which sulfate emissions from stationary sources add to the potential health risk associated with sulfuric acid emissions from automobiles is not known at this time. However, most health analyses treat stationary source and mobile source emissions of sulfates independently. This is primarily because (1) the particle size of sulfates from stationary sources is much larger than sulfuric acid mist and is not absorbed as deeply into the respiratory system; (2) the toxicity of sulfate emissions from stationary sources is generally much less than sulfuric acid; and (3) emissions from stationary sources do not occur in the breathing zone as do automobile emissions. Under certain adverse meteorological conditions localized sulfuric acid problems could occur. There are two shortterm actions available to offset this possibility. While feasible, both have drawbacks.

- Gasoline blending catalysts equipped vehicles could be provided with lead-free low-sulfur fuel. This would reduce emissions of sulfuric acid, but would impose an allocation problem on the industry. Refiners have also indicated that sufficient quantities would not be available to meet widespread problems beyond 1977 or 1978.
- Desulfurization of oil technically possible at this time. Desulfurization would require substantial additional capital investment, at a time when refiners are attempting to expand domestic capacity. It would also require an increase in crude oil consumption due to additional refining. Increases in the price of gasoline would occur. Nationwide, the capital cost of desulfurization would range between \$2 and \$4 billion, crude oil consumption would increase .5 percent and the price of gasoline would increase by 1 to 2 cents per gallon.

Actions That May Increase or Create Pollutants:

It is generally agreed that reducing NOX emissions will result in an increase in the emissions of HC from engines. To reduce that increment manufacturers may increase the use of the air-injected oxidation catalyst -- even to meet the Federal Interim HC and CO standards. If this were the case, then nearly twice as much sulfuric acid would be generated as projected. At this time it is not known definitely whether manufacturers could achieve reductions of the HC increment through the use of engine modifications or modified catalyst equipment instead of the air-injected catalysts in 1977-78. However, if the HC and CO standards are also lowered after model year 1978 there is a high probability that the airinjection catalyst would be retained throughout the entire period.

There are other anecdotal problems with the converters such as potential fire hazards, hydrogen sulfide emissions and the creation of other potentially hazardous compounds, but none of these has been proven a significant risk.

Mandated reductions in the automobile emission standard will also narrow the choice of technological options to abate the three regulated pollutants. For example, if a sulfuric acid standard were set for model year 1979, implementation of the statutory standards for HC, CO and NOX in 1978 would, in essence, dictate the use of either "dual" or "three-way" catalyst technologies on most vehicles. While these catalysts have promise as abatement technologies they are still in the early stages of development and their premature implementation could possibily have adverse health effects far in excess of the benefits of reducing HC, CO and NOX.

Based on existing data, the dual catalyst system appears to be the most promising technology for meeting the statutory emission standards. However, its ability to limit sulfuric acid emissions to low concentrations, and thus meet a sulfuric acid standard, is still in question since an integral component of the dual catalyst system is an oxidation catalyst like those currently in use for 1975 model vehicles. Sulfuric acid emissions would increase if, to meet the statutory HC and CO standards, an air-injected oxidation catalyst were used.

If the statutory standards are in effect in 1978, along with a sulfuric acid standard in 1979, then it appears that the most likely technology to be used is the three-way catalyst -a single device that simultaneously abates HC, CO and NOX.

However, to achieve these simultaneous reductions, extensive redesign and control of the fuel induction system must be undertaken because the three-way catalyst must be operated at stoichiometric (no excess air) conditions. In fact, the permitted margin of error is so narrow (on the order of \pm 0.50 percent of the exact air to fuel ratio needed, as compared to normal production variations of \pm 7 to 10 percent) that the use of an oxygen sensor and a feedback system are required to regulate the air mixture for either a carburetor or fuel-injection process.

When operating at the stoichiometric conditions, sulfate emissions would be no greater than emissions from non-catalyst cars. However, if variations from that condition occur, severe adverse health effect may be generated. Three-way catalysts applied to exhausts from engines operated outside the carburetion design limits (variations greater than \pm 0.50 percent from stoichiometric) have a potential for emitting dangerous quantities of such toxic pollutants as hydrogen sulfide, carbonly disulfide, carbon disulfide and hydrogen cyanide.

It should be emphasized that only the most preliminary data exists on the total emissions from three-way catalysts and no firm judgment can be made on whether or not such emissions will occur in normal use, or in what quantities they will occur. However, they must be treated as potential risks until there is firm evidence that demonstrates otherwise. The development of this technology has not progressed to the stage where firm conclusions on their long run health impacts are possible.

The long run durability of this technology is also unproven at this time and several more years of testing and development seem needed before full scale introduction of three-way catalysts should be undertaken regardless of the emission standard mandated. Furthermore, the required changes in the fuel induction system would most likely require the use of electronic fuel injection, which is now available from component manufacturers only in very limited quantities. These manufacturers testified at the EPA suspension hearings that, after a decision had been made to use electronic fuel injection systems on a widespread basis, from 3 to 5 years would be required to design, manufacture, and deliver these components.

It seems clear, that given the limited health benefits derived from instituting the statutory standards (see #2 above) and given the unknown but potentially adverse health effects of introducing a technology which has not been thoroughly tested, the wiser choice is to avoid forcing either of these catalyst technologies into mass production at this time. 5. Auto emission standards have had an impact on fuel economy and, therefore, on our Nation's total petroleum demands and reliance on foreign sources.

The options presented will have differential fuel economy impacts.

Impact on 40 percent fuel economy goal

Alternatives	% over 1974	Shortfall (-) or excess (+) over President's goal
Statutory Standards after 1977	14-30%	-10 to -26%
Energy Independence Act	40%	
EPA Recommendation	36%	- 48
1975 Standards thru 1981	46%	+ 6%
Canadian & 1974 Standards thru 1981	46%	+ 6%
Alternatives*	Barrels	per day (in 1980)
Statutory Standards after 1977 Energy Independence Act EPA Recommendation 1975 Standards thru 1981 Canadian and 1974 Standards thru 1981	1	,000 - 411,000 (loss) 35,000 (loss) 37,000 (loss) 0 0

* Base is 1975 model year automobiles meeting 1975 interim emission standards.

Energy Implications for lowering NOX to 2.0 grams/mile

It is generally agreed that a reduction in the NOX emission levels from 3.1 to 2.0 grams/mile will require engine modifications. It is estimated that these modifications will result in a fuel economy penalty of 3-4 percent on the average in 1980. If a 3 percent fuel penalty is assumed, an additional requirement of 85,000 barrels of oil per day will occur nationwide in 1980.

This estimated fuel penalty figure is the subject of debate, however, on two grounds. First, it has been argued that fuel penalties in 1980 assume that certain advanced engine technologies will be introduced over the next five years. However, these advanced technologies would not be available in the first two years. Therefore, at the year of introduction, initial fuel penalty resulting from lower NOX emission standards would be substantially greater. A range of between 5 and 7 percent, i.e., from 120,000 to 150,000 barrels per day is estimated, if the 2.0 grams/mile standard were adopted.

The second argument revolves around the very sensitive relationship that exists between fuel economy and NOX emissions at more stringent NOX standards than currently required. For a given level of HC emissions a dramatic drop in fuel economy is required to meet a NOX standard below 2.0 grams/mile. Because of mass production variations, to ensure that emission standards are met, manufacturers must design their emission systems well below the Federal standards -- about 23 percent lower. Thus, to meet a 3.1 gram/mile limitation, vehicles are designed to achieve 2.4 grams/mile and to achieve a 2.0 level, vehicles are designed to emit not more than 1.3 to 1.5 grams/mile. (To meet the statutory .4 grams/mile vehicles would have to be designed to meet about .3 grams/mile). Thus, designing vehicles to meet even the 2.0 standard places the fuel economy loss well within the sensitive range at which fuel economy begins to drop most rapidly. Attachment 4 (a) illustrates the general relationship between fuel economy and NOX emissions for all spark ignition engines while 4 (b) shows the situation for a specific class of V-8 engines.

Energy Implications of HC and CO Standards Tighter Than Those Currently In Force

Assuming a 3.1 gram/mile NOX standard, a fuel economy penalty of 3 to 5 percent is associated with emission standards for hydrocarbons and carbon monoxide of .9 and 9.0 grams/mile when compared to extending the current standards of 1.5 and 15 (i.e., 85,000 barrels of oil per day in 1980). Retention of the 1.5 (CO) and 15 (HC) levels until 1979 would avoid most of the penalty. Retention of the current standards through 1981 would allow continued fuel economy improvements as would the adoption of the Canadian standards.

Energy Implications of the Statutory Standards for HC, CO and NOX

With either the dual or three-way catalyst, a single device is used to abate all three regulated pollutants. Thus, at the statutory standards the energy impacts are not measured separately for NOX and HC/CO. On the average, the adoption of the statutory standard in 1978 would result in a fuel penalty of 7 to 17 percent by 1980 over 1975 vehicles. This would mean an energy loss of 224,000 to 411,000 barrels of oil per day in 1980.

Attachment 5 shows the specific fuel economy losses (or gains) associated with each of the options presented (and the anticipated costs) with respect to model year 1974.

Standards Tighter Than the 1975 Interim Will Result in Higher Initial Car Costs and Higher Operating Cost Due to Associated Fuel Penalties

The options presented will impose varying cost burdens on the consumer. Also, separate costs are associated with actions on NOX and actions on HC and CO, except for meeting the statutory standards with a dual or three-way catalyst system.

NOX:

Consumers will face sticker price and operating cost increases over the 1975 model vehicles if a 2.0 gram/mile limitation is imposed. Estimates range from \$10-25 for front-end costs per vehicle and from \$0-25 in operating costs over 50,000 miles. In addition, the consumers will pay the costs of increased fuel consumption associated with this lower standard, which rough estimates place at \$1.7 million per day, or over 600 million dollars per year.

HC and CO:

The costs of adopting the more stringent hydrocarbon and carbon monoxide standards (.9 and 9.0) as proposed in the Energy Independence Act is estimated to be \$50 per vehicle over 1975 automobiles. This would represent the additional costs of using the air-injected oxidation catalyst. Additional operating costs, which would result from the increased consumption of gasoline, are estimated at \$1.7 million per day, or over 600 million dollars per year.

Statutory HC, CO and NOX:

Adoption of the statutory standards would result in a sticker price increase of \$230 to \$270 per vehicle over 1975 model cars. This would represent the average costs of using a mix of the dual and three-way catalyst systems. Operating costs resulting from the associated fuel penalties of this alternative would roughly be \$4 million per day or over \$1.5 billion per year.

6. The basic philosophy and approach to future auto emission controls needs to be reconsidered in light of current conditions

While the choice of emission standards must represent a balance among public health, air quality, esthetic, energy and cost considerations, the problems currently confronting the Nation are different from those prevailing in 1970 when the Clean Air Act was passed. Inflation, unemployment, and the added cost and reduced availability of energy call for reassessment of the relative weights accorded to various factors other than measures necessary to health. The high cost and fuel penalties caused by further tightening of the standards; and the emergence of the sulfuric acid problem, compared to the marginal improvement in HC, CO and NOX air quality also call for careful reconsideration.

(a) Significantly tighter standards at this time may preclude continued development of some technologies

There is substantial evidence that by model year 1981 new "leanburn" or stratified charge" engines would permit meeting the lower (2.0) NOX standard. However, NOX standards more stringent than 2.0 would preclude introduction of those technologies. In fact, unless application of the current statutory NOX standard (.4 grams/mile) is delayed through at least 1990, the industry will not (and cannot) shift to a lean-burn or stratified charge engine, as far as can be foreseen.

(b) Actions to reduce auto emissions must take into account other sources of the same pollutant

Only 25 percent of total HC emissions are generated by automobile exhaust. Therefore, HC ambient air concentrations tend to be much less sensitive to the level of vehicle emission control than is carbon monoxide.

The projected increases in NOX cannot be stopped without major technological innovations in stationary source control. Therefore, regardless of how stringent an automobile standard is applied, the future concentration levels in major metropolitan areas will primarily be a function of stationary source emissions.

CO levels in the atmosphere are much more sensitive to changes in automobile emission controls than either HC or NOX. Unlike those pollutants, the growth of stationary sources over the next ten years all have little effect on CO air quality.

7. Prompt Congressional action is needed on auto emission standards

In order to meet deadlines for emission testing and certification of 1977 model cars, the automobile industry will need to know 1977 emission standards by early August 1975 so that there will be time to complete designing and engineering, build prototypes, complete emissions testing such as 50,000 mile endurance tests, and finally to produce new cars in adequate quantity to meet the demand from the American public.

 $e^{-\varepsilon_{i_1}}$

Predicted Ambient Oxidant Concentration Levels in 1985 (In parts per million) Ambient Standard = .08 ppm*

	1974 and	Current	EPA's	Energy	<u> </u>	
	Canadian	Stds	Recom-	Independ-	Statutory	
	Standards	through	mended	ence Act	Stds	Base
Region	through 1981	1981	Stds	Proposal	1 977- 1990	1971-73
Birmingham	.12	.12	.11	.11	.11	.22
Mobile-Pensacola	.04	.04	.04	.04	.04	.11
Clark-Mohave	.13	.12	.12	.12	.12	. 22
Pnoenix-Tucson	.16	.16	.16	.16	.16	.19
Los Angeles	.43	.42	.42	.41	.41	.62
Sacramento Valley	.21	.20	.20	.20	. 20	. 24
San Diego	.20	. 20	.20	.19	.19	.30
San Francisco	.23	.23	.23	.23	.23	. 30
San Joaquin	.22	.21	.21	.21	.21	.26
S.E. Desert	. 32	.32	.32	.32	. 32	.28
Denver	.17	.16	.16	.16	.16	.28
NY-NJ-Conn.	.14	.13	.13	.13	.13	.26
Philadelphia	.10	.10	.10	.10	.10	.20
National Capital	.26	.26	. 25	.25	.25	. 3 6
Cincinnati	.12	.11	.11	.11	.11	.17
Indianapolis	.08	.08	.08	.08	.08	.14
S. LouS.E. Texas	.20	. 20	.19	.19	.19	. 32
Boston	.11	.10	.10	.10	.10	.21
Toledo	.07	.07	.07	.07	.07	.14
El Paso-Las Cruces	.06	.06	.05	.05	.05	.13
Genessee-Finger						
Lakes	.08	.08	.08	.08	.07	.15
Dayton	.13	.12	.12	.12	.12	.18
Portland, Oregon	.08	.08	.08	.08	.08	.14
S.W. Penn.	.12	.12	.11	.11	.11	.21
Austin-Waco	.07	.07	.07	.07	.07	.16
Corpus-Christi	.14	.14	.14	.14	.14	.19
Dallas-Ft. Worth	.05	.05	.05	.05	.04	.13
Houston-Galveston	.27	.27	.27	.27	. 26	.32
San Antonio	.07	.07	.07	.07	.06	.15
Puget Sound	.08	.08	.08	.08	.08	.16

HC Automobile Emission Standard

* The projected concentration levels assume the continuance of historic growth rates in the central business districts in each region.

The effect of a nigher, areawide or "metropolitan growth rate" on oxidant concentrations was also considered. The metro-growth rate assumes a much higher rate of growth in vehicle miles traveled and includes entire metropolitan areas rather than central business districts alone. However, predicted ambient concentration levels for oxidants using the higher growth rate are only marginally higher than predicted concentration levels using the CBD growth rate for all the HC auto-emission alternatives studied. More importantly, only three areas (Indianapolis, Genesse-Finger Lake and San Antonio) which would achieve the standard using the CBD growth rate, would exceed the standard by a very marginal amount if the higher metro-growth rate were assumed.

Therefore, assumption of the higher growth rate would not change the above analysis or conclusions about the impact of HC auto standards on photochemical oxidant concentration levels.

Predicted Ambient Carbon Monoxide Concentration Levels in 1985 (In parts per million) Ambient standard = 9 ppm

		CO A	utomobile F	Emission Stan	dard	
Region	1974 and Canadian Standards through 1981	Current Stds through 1981	EPA's Recom- mended Stds	Energy Independ- ence Act Proposal	Statutory Stds 1977-1990	Base 1971-73
Birmingham	6	5	5	5	4	18
North Alaska	11	11	11	11	11	35
Clark-Mohave	6	6	5	5	5	15
Pnoenix-Tucson	16	14	14	13	12	42
Los Angeles	13	12	11	11	10	41
Sacramento Valley	7	6	6	6	5	22
San Diego	5	5	5	5	4	15
san Francisco	6	6	6	6	6	18
San Joaquin	4	3	3	3	3	13
Denver*	11	11	9	9	8	33
Hartford-New						
Haven	9	9	7	7	7	27
NY-NJ-Conn.	15	13	13	13	11	51
Philadelphia	9	8	8	8	8	32
National Capital	7	6	6	6	6	20
E. Washington-						
N. Idano	7	7	6	6	6	18
Chicago	7	6	6	5	5	23
Indianapolis	5	4	4	4	4	15
Kansas City	6	5	5	5	4	15
Baltimore	7	7	7	7	6	18
Boston	6	5	5	5	4	18
Minneapolis-						
St. Paul	9	8	8	7	7	22
Central New York	5	4	4 8	4	4	15
Portland, Oregon**	10	8	8	8	7	26
S.W. Penn. '	7	6	6	6	5	22
Wasatch Front	15	13	13	13	11	41
Puget Sound**	10	8	8	8	7	24

*Would not meet the ambient standard in 1985 if the Current Interim, 1974 or Canadian CO standard for venicles were adopted through 1981

**Would meet the ambient standard under all options except the 1974 or Canadian vehicle CO standard

Nitrogen Dioxide

Chart A displays ambient concentration levels in 1985 for NO2 in the ten problem regions under various NOX auto-emission standards. For example, column 1 shows that if a 3.0 gr/mile auto-NOX standard were in force from 1977 to 1990, Philadelphia's ambient NO2 concentration levels in 1985 are predicted to be 121 ug/m^3 . Column 5 shows that if an NOX standard of 2.0 gr/mile were adopted for the 1977-1981 period, followed by the statutory (.4) standard until 1990, then Philadelphia's ambient NO2 level in 1985 is predicted to be 113 ug/m^3 .

Chart B shows the average percentage increases in NO2 concentration levels for all ten regions for each alternative NOX level. For example, column 2 shows that if the NOX emission level were 3.1 gr/mile from 1977-1981 and 2.0 gr/mile from 1982-1990, the NO2 concentration levels are predicted to increase by 16% in 1980 and by 26% in 1985. Column 3 shows that if the NOX standard were 2.0 from 1977 to 1990, NO2 levels are predicted to increase by 12% and 22% in 1980 and 1985 respectively.

A. Predicted Ambient Nitrogen Dioxide Concentrations in 1985 (In micrograms per cubic meter) Ambient standard is 100 micrograms per cubic meter*

Effective Date of Standard		(NOX Emission	Standa	ard (in grams	per mi	le)
Effective Date of Standard	(1)	(2)	(3)	(4)	(5)	(6)
1977-1981	3.1	3.1	2.0	3.1	2.0	0.4(1978)
1982-1990	3.1	2.0	2.0	.4	.4	0.4
Region						
Phoenix	111	105	100	98	93	87
Los Angeles	194	183	173	167	157	145
San Francisco	102	96	92	89	83	77
Denver	135	129	125	123	117	112
NY-NJ-Conn.	144	139	136	132	129	124
Philadelphia	121	119	117	115	113	109
National Capital	116	111	107	105	101	96
Chicago	152	148	145	143	139	134
Baltimore	116	112	109	107	103	99
Wasatch Frong	137	131	124	121	115	108

	B. Increases	in Conce	ntration L	evels in 19	80 and 198	35	
Average per- cent increase	1980	16	16	12	16	12	6
in air quality concentrations	1985	32	26	22	19	14	8

*The projected concentration levels assume the continuance of historic growth rates for the central business districts in each region. The effect of a higher, areawide or "metropolitan growth rate" on NO2 concentrations was also considered. The metro-growth rate assumes a much higher rate of growth in vehicle miles traveled (VMT) and includes entire metropolitan areas rather than central business districts alone. Ambient levels of NO2, using the metro-growth rate were considerably higher under all the auto-emission alternatives presented. When comparing 1985 percentage increases ((mart B) using a metro-growth rate as opposed to the CBD growth rate, average NO2 concentration levels are predicted to increase by 46% as compared to 33% for a long term 3.1 gr/mile NCX standard (Column 1); 33% as compared to 22% for a long term 2.0 gr/mile NOX standard Colum: 3) and 16% as compared to 8% for the statutory standard (Column 6).

The higher predicted NO2 concentration levels that result from assuming the metro-growth

Nitrogen Dioxide cont'd.

rate strongly suggest that the choice of NOX emission standard for automobiles would have even less impact on the ability of communities to maintain the ambient standard than is the case above, using the CBD growth rate. In fact, if the higher growth rate is assumed, all ten regions are predicted to exceed the ambient NO2 standard by 1985 regardless of the auto emission limit chosen for NOX. The only exception would be San Francisco, which would stay below the standard if the statutory auto standard for NOX were implemented in 1978.



MAXIMUM FUEL ECONOMY POTENTIAL VERSUS EMISSIONS FOR 1980 ENGINES UNDER OPTIMAL CONTROL

3. THE OPTIMUM-MPG* AND RESULTING NO_x* AND HC* ARE SIGNIFICANTLY GREATER THAN THE ENGINE OUT PERFORMANCE OF 1975 CARS.

FUEL-ECONOMY-NOX EMISSION TRADE OFF



1980 New Car Fuel Economy and Cost Versus Emission Standards

		Per New Car sion Controls		New Car Average Fuel Economy in 1980				
Emission Standards For 1977-1981	Compared to 1974 Cars				Uncertainty Range in % Over 1974 Due to			
	Cost	Uncertainty	MPG	% Over 1974	Engine Technology	Sales Mix		
 Statutory Standards after 1977 (three-way catalyst or dual catalyst) 	\$350	\$215-\$450			-4% to + 8%	-4% to +7%		
2. Base - 1.5/15/2.0 or 0.9/9.0/3.1 With Catalysts No Catalysts	120 50	\$ 90-\$150 \$ 40-\$100	19.6 18.4	40% 31%	-3% to + 3% -4% to + 8%	-4% to +7%		
3. EPA Proposal With Catalysts No Catalysts	135 65	\$100-\$170 \$ 50-\$110	19.0 17.8	36% 27%	-5% to + 8% -4% to +12%	-4% to +7%		
4. 1975 Standards With Catalysts No Catalysts	95 35	\$ 70-\$110 \$ 25-\$ 65	20.4 19.2	46% 37%	-2% to + 2% -3% to + 7%	-4% to +7%		
5. Canadian or 1974 Standards With or Without Catalysts	25	\$ ⁻ 5-\$ 35	20.4	46%	-2% to + 1%	-4% to +7%		

Attachment 5

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FILE

EMBARGOED FOR RELEASE UNTIL 3:00 P.M. (LDM) June 27, 1975

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

Amendments to the Clean Air Act (affecting automobile emission standards)

The President recommended today that Congress pass legislation designed to amend the Clean Air Act by extending the current automobile emission standards from 1977 until 1981.

While this action will have no significant impact on our efforts to achieve the objectives of the Clean Air Act, the proposed modifications are necessary to (1) avoid certain recently recognized potential health risks associated with the catalytic converter and (2) permit substantially greater fuel efficiencies over the next five years.

All of the enforcement, certification and inspection measures contained in the Clean Air Act will be retained.

This proposal supercedes Section 503, Title V, of the President's Energy Independence Act of 1975 which he sent to Congress on January 30, 1975. At that time, the President proposed emission standards based on a modification of the current California standards.

BACKGROUND

After submitting the Energy Independence Act to the Congress, the Environmental Protection Agency held public hearings on the manufacturers' requests for a suspension of the 1977 auto emission standards and also took testimony related to five-year emission levels. The hearings established that the catalytic converter, used to meet the HC and CO standards for 1975 and 1976 model year vehicles, produces sulfuric acid in amounts that can pose a significant public health risk.

In addition, because of the technology likely to be used to achieve these tighter standards, automobile emissions of sulfuric acid may double if the more stringent HC and CO standards previously proposed in the Energy Independence Act are imposed for 1977 and subsequent years.

Accordingly, the President directed an interagency task force to undertake a major review of the public health, energy and consumer cost implications of several widely discussed levels of automobile emission standards. The President's decision announced today is based upon this review.

more

The President will propose legislation to maintain the current automobile emission standards through model year 1980. This will accomplish the following objectives:

- Health. Avoid increasing the potential adverse health impacts of certain automobile emission devices by retaining current controls on known health hazards, such as carbon monoxide and hydrocarbons, without the risk of increasing other imperfectly understood but potentially dangerous pollutants such as sulfuric acid.
- . Energy. Achieve an increase of 40 percent or greater in automobile fuel efficiency by 1980.
- Environment. Achieve almost all the environmental objectives we would have achieved by going to stricter standards.
- Economy. Minimize the inflationary impact of Federal regulations on the cost of automobiles to consumers. Avoid aggravating unemployment, especially in the automobile industry.

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FORD

THE WHITE HOUSE

WASHINGTON

June 27, 1975

MEMORANDUM FOR:

MAX L. FRIEDERSDORF

FROM:

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SUBJECT:

Congressional Contacts on Clean Air Act Amendments, extending auto emission standards from 1977 to 1981.

Pursuant to your request, attached are the comments of the Congressmen contacted regarding the above matter.
THE WHITE HOUSE

WASHINGTON

<u>Rep. Paul G. Rogers</u> - D. - Fla., Washington, D.C. Contact: Chairman Rogers

Comments: Thanked us for the advance notice. Indicated neither support nor opposition to the President's statement.

<u>Rep. Clarence J. Brown</u>, R.-Ohio, District office in Springfield, Ohio Contact: Congressman Brown

Comments: Appreciated advance notice. Asked that the President's statement and the Energy Resources Council memorandum be delivered to his office.

<u>Rep. James T. Broyhill</u>, R.-N.C., Within District Contact: Congressman Broyhill

Comments: Recognizes the President's statement embodies a major shift in the Administration's position on auto emission standards. The Congressman is interested in acquiring all available background material and wants to be a sponsor of the Administration's legislation referred to in the Presidential statement.

Rep. John D. Dingell, D.-Mich., Washington, D.C.

Contact: Chairman Dingell

Comments: Chairman Dingell believes that the President's modification calling for a <u>current</u> extension is very wise. However, he did state that it was his opinion that Congress would not grant a 5-year extension, but rather would more likely adopt an extension of approximately three years. In addition, Mr. Dingell said he felt there would be some congressional criticism of the President's statement. This criticism was addressed the fact that the 5-year extension would neglect severe environmental concerns. Mr. Dingell hastened to add that he would not be critical of the President's announced statement.

Rep. H. J. Heinz, R.-Pa., Washington, D.C.

Contact: Warren Eisenberg, Administrative Assistant Comments: Congressman Heinz is in Pittsburgh, Pennsylvania and was not where he could be immediately contacted. His AA was briefed and was told if the Congressman had any questions we would be available to respond throughout the course of the day. Rep. James F. Hastings, R.-N.Y., Lake George, New York Contact: Ms. Clare Bradley, Executive Secretary Comments: Informed Ms. Bradley of the Presidential statement. She will be seeing Congressman Hastings during the early afternoon and will inform him of the contents in the President's statement. If the congressman has any questions he will contact us.

Samuel L. Devine, R. -Ohio, Columbus, Ohio Contact: Congressman Devine Comments: Thanks for the information.

<u>Rep. Tim Lee Carter</u>, R. -Ky., Home in Kentucky Contact: Congressman Carter

Comments: Congressman Carter said that as ranking member in the House Health and Environment Subcommittee of the House Interstate and Foreign Commerce Committee, he supported the President's statement. He appreciated advance notice.

Speaker Carl Albert, D - Okla.) - out of town

Contact: Joel Jankowsky in Speaker's Office.

Comments: No need to contact the Speaker directly as he is out of town. Mike Reed and Joel Jankowsky will advise him.

Rep. Bob Michel, R-III., in his Washington, D.C. office

Contact: Rep. Michel and his aides.

Comments: Nothing in there for burning of coal, etc. by industries. Has no real problem with the extension of auto emission standards but strongly recommends that some action be taken immediately on the problem of industries burning of coal as it is a violation of the clean air act.

Rep. John McFall, D- Calif., in the Majority Whip's office Contact: Spoke directly with Rep. McFall

Comments: All for it -- standards are too tight. For cleaning up the environment but we are going too far on the environmental side. Don't care what Ralph Nader says. We need to give the auto manufacturers some room to maneuver to obtain greater fuel efficiency.

Rep. Barber Conable, (R-NY)

Contact: Harry Nicholas, AA to Rep. Conable

Comments: Will pass the information on to Rep. Conable. Conable is travelling to speaking engagement. Will tell Conable when he calls into the office.

Rep. Tip O'Neill, (D - Mass.)

Contact: Home of Gary Hymel

Comments: Not a matter to try and contact Rep. O'Neill on, as he is out of town. Tip will be all for it. Consider notice to Hymel as notice to Tip.

Rep. John Anderson, (R - Ill.)

Contact: At Rep. Anderson's home

Comments: Wanted to know the basis for the change in position and explained that the President's energy program had recommended different auto emission standards through 1980. Because of the health problems associated with the catalytic converter and the need for greater fuel efficiencies and how they are achieved it was decided to extend present auto emission standards. Wanted to know if this would take legislation and told him that it would.

Rep. Harley Staggers, (D - W.Va.)

Contact: Talked to Marguerite Furfari in Congressional Office (A.A to Staggers Comments: Rep. Staggers at a speaking engagement and will be given the information when he calls in. Rep. John Rhodes, (R - Ariz)

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Contact: Congressional Office - Dennis Taylor's sec'y, Joanne Comments: No comments. She will inform Dennis Taylor who will notify Mr. Rhodes.

July 16, 1975

STAFF BRIEFING NOTES

EMISSIONS STANDARDS SUSPENSION ISSUE

- o In recommending suspension of emissions Standards through 1981, we should not argue question of how much clean air we need.
 - . Have tended to argue mainly on the basis of technology
- o Should stress the important <u>economic</u> consequences of emission Standards.
- o There are significant real costs
 - Direct consumer costs for 1978 Standards range from \$150 to \$340/vehicle; in a 10M car year, aggregate consumer cost ranges from \$1.5B to \$3.4B
 - . According to Chase volume-price model and Leontief sales-employment model, a price boost of \$200 for 1978 emissions controls drops sales by \$1 B to \$4B; direct and indirect <u>unemployment of 57,000 to 228,000</u> workers results.
 - Fuel economy loss due to 1978 Standards equals 10-20%; assuming 15,000 miles/year average for each car, and 14 mpg, gas consumption increases by 110-220 gallons --using projected 1978 gas rate of 70¢/gallon, additional operating costs of \$77 to \$154/car result.
 - . <u>Increased maintenance</u> costs will result to properly maintain emission systems; over five-year car life, total costs equal \$174.
 - o <u>Total added costs</u> related to emissions equal \$1,098/vehicle over five-year life--three to five times original equipment cost

- o There are significant opportunity costs
 - . Industry estimates capital needs of \$1B to meet 1978 Standards; this must be <u>diverted from productive</u> purposes, including, fuel economy improvement.
- o Improvement of fuel economy by 40%, as pledged by industry, would result in a five-year fuel savings of \$1,250/vehicle.
- Incremental costs resulting from the imposition of emissions
 Standards equal the difference between estimated cost of \$1,098
 and potential fuel savings of \$1,250--net cost equals \$2,348 per five-year vehicle life.
- o Costs of tighter emissions Standards are regressive
 - . Costs borne by all buyers, regardless of cost or purchase price.
 - . Costs affect all purchasers regardless of income.
- o Administration spokesmen should <u>emphasize economic consequences</u> of tighter Standards, which include:
 - . Reduced industry capital for work on engine efficiency
 - . Higher direct consumer purchase prices
 - . Inflationary effects due to higher operating costs

Charlie

THE WHITE HOUSE

WASHINGTON

July 17, 1975

MEMORANDUM

TO: L. WILLIAM SEIDMAN

FROM: WILLIAM F. GOROG

SUBJECT: President's Recommendation to Suspend Emission Standards

This Memorandum has been prepared to examine the economic impact of the President's recommendation to suspend auto/ truck emission standards for five years.

I feel it extremely important that we do not try to argue the President's position on the largely unproven and unquantifiable question of how much clean air is needed. Likewise, we is not have to rely solely on the argument that the technology to meet the 1978 standards is not now available. I do think that we can supplement the arguments made to date with the economic aspects of this decision. There is, of course, the problem of being drawn into a public posture of matching dollars against health, but if done carefully, I believe we can decouple the two sides of the question.

The economic argument we hear most frequently is the additional incremental costs to the consumer of the 1978 Standard equipment. However, this represents only a part of the additional costs to both the economy and the individual consumer. We need to examine also the effect of diverting the manufacturer's capital funds to meet these objectives, the impact of the additional costs and consumer confusion on sales, the additional operating costs from lower engine efficiencies, and the lost opportunity for lower operating costs. Since this is a rather complex subject, I am simply going to summarize our data about the economic impact of some of these considerations. The simplest presentation is the direct costs of the Standards to the consumer.

Consumer Costs

- Direct Equipment Costs Although the technology to achieve the higher standards does not now exist, the industry has estimated that the equipment alone will cost somewhere between \$150 to \$340 per vehicle, with the higher figure being more likely. This would mean in a tenmillion car year the additional costs to consumers would be \$1.5 to \$3.4 billion per year.
- Maintenance Costs The industry has made estimates based upon current experience of maintenance of existing emission control equipment, and extrapolating to include the unproven technology that would be involved in meeting the 1978 Standards, it expects maintenance part costs of \$70 and maintenance labor costs of seven hours over five years. At the current contract rate of \$13 per hour, this adds up to about \$161 over this period.
- Operating Costs The industry estimates that the 1978 standards would result in a fuel economy loss of between 10% and 20%. Assuming that the average attomobile is driven 15,000 miles per year, and currently averages 14 miles per gallon, consumption would increase anywhere from 110 to 220 gallons per year with the 1978 standard equipment. With gasoline prices currently projected at the 70¢ a gallon rate for 1978, this represents an additional cost of operation of between \$77 and \$154 per year. This would be between \$375 and \$770 over the estimated five year life of a vehicle.
- Opportunity Costs (potential consumer savings) The other side of the consumer cost coin is the savings that the consumer would be losing under the 1978 Standards. If we assume that the

manufacturers could take the capital funds required for engineering research, design, and production of equipment of the Standards equipment (estimated to be \$1 billion) and apply that instead to gaining fuel economy, an operating cost savings to the consumer would be generated. The industry has pledged that given the necessary funds, they are capable of improving fuel economy by 40%.

Applying the same assumptions used to calculate the additional operating costs above, we could achieve an estimated savings per vehicle of \$1,250 per vehicle over the useful life of the vehicle.

Macro Economic Impact

While not subject to precise measurement, we can expect that this action will cause a ripple effect on the whole economy.

One of the major effects would be upon employment in the auto industry. With higher purchase prices and higher operating costs, it is reasonable to expect a drop in automobile sales, at least in the near term. (Using the Chase Econometric Model for automotive volume price relationships and Wassily Leontief's sales/employment model, it has been estimated that the adverse employment effect for the industry, including industry-related employment, would be somewhere between 57,000 and 228,000 jobs)

An additional economic cost would take the form of an increase in the WPI (both in the form of higher operating costs as well as direct sales costs) which, as more wages are index-tied, would send out an inflationary ripple.

A further consideration arises from the fact that the additional economic costs accrue independently of the size or purchase price of the vehicle. This implies that the additional costs will affect all purchasers irrespective of income and thus will fall proportionally heavier on those with low incomes than on those in higher income brackets. While it would not be possible to undertake a complete cost/benefit analysis without a great deal of data regarding the costs of whatever additional pollution was created by suspending the Standards, the analysis would be, in my estimation, not very useful because:

- There is no clear evidence that the tighter standards would achieve any measurable reduction in pollution. Thus, with a zero denominator, such an analysis would be meaningless.
- 2. If the question is posed in terms of the nation's health, there is no measure which can adequately translate such a criteria into dollars.

Finally, the suspension actions must be measured in terms of its impact on the nation's energy program. Should the higher fuel economies be met, this would mean that an additional 3/4 to 1 billion gallons of gasoline per production year would not be consumed.

Summary

To millions of consumers the additional economic costs will be significant. The difference between the estimated additional costs generated by the enforcement of the Standards over an average five-year vehicle life is significant; between \$686 and \$1,271. When this is put against the potential operating cost savings of \$1,250, that may be generated by suspending the Standards, the real cost to consumers is even more significant.

It is important that Administration spokesmen emphasize the economic impact of the decision. Forcing compliance will strip industry of capital needed to retool for more efficient engines, will cost the consumer directly in added ecuipment costs, and will continue to be inflationary due to higher operating costs.

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Office of the White House Press Secretary

THE WHITE HOUSE

TEXT OF LETTERS FROM THE PRESIDENT TO THE CHAIRMAN, SENATE WORKS COMMITTEE AND THE CHAIRMAN, HOUSE INTERSTATE AND FOREIGN COMMERCE COMMITTEE

July 26, 1975

Dear Mr. Chairman:

On June 27th, I transmitted to the Congress a special message which described the conclusions from a detailed executive branch review of the air quality, health, energy, and consumer cost implications of alternative automobile emission standards. I recommended that 1975-76 standards for automobile emissions be extended by the Congress through model year 1981.

I believe it important that the Congress and the public have a full opportunity to hear in detail the findings of our studies and the basis for my conclusions that existing standards should be continued. I recognize that the hearings held by your subcommittee on auto emissions ended before our studies were completed. I urge you to hold another hearing on this matter so Administration witnesses can present the findings.

Sincerely,

GERALD R. FORD

The Honorable Jennings Randolph The Honorable Harley O. Staggers Chairman Public Works Committee United States Senate Washington, D.C. 20510

Chairman Interstate and Foreign Commerce Committee House of Representatives Washington, D.C. 20515

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THE WHITE HOUSE

WASHINGTON

July 26, 1975

Dear Mr. Speaker:

On June 27, 1975, I transmitted a special message to the Congress which described the complex problem of setting automobile emission standards which strike the best possible balance among our air quality, public health, energy, consumer cost and other economic objectives.

As indicated in that message, I have concluded that automobile emission standards should not be more rigid than those applied to 1975 and 1976 model cars because more rigid standards unnecessarily would increase car prices, reduce gasoline mileage, and increase energy demands. There is also the potential that tighter standards would require emission controls that result in new pollutants with serious health impact.

I am enclosing a draft of a bill which would implement the recommendations described in detail in my June 27th message. I urge prompt passage of this bill.

Sincerely,

Herself R. 7ml

The Honorable The Speaker U.S. House of Representatives Washington, D.C. 20515 To amend the Clean Air Act to continue 1975-76 Federal automobile emission standards through the 1981 model year to permit a balance among the important objectives of improving air quality, protecting public health and safety, and avoiding unnecessary increases in consumer costs for automobiles, decreases in gasoline mileage, and increases in the Nation's dependence on imported oil.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled,

Sec. 2. The Clean Air Act, as amended, is amended as follows:

(a) Section 202(b)(1)(A) is amended to delete therefrom"1977" and insert in lieu thereof "1982."

(b) Section 202(b)(l)(A) is further amended to delete the last sentence therefrom and insert the following sentence in lieu thereof:

"The regulations under subsection (a) applicable to emissions of carbon monoxide and hydrocarbons from lightduty vehicles and engines manufactured during model years 1975 through 1981, inclusive, shall contain standards which are identical to the interim standards which were prescribed (as of December 1, 1973) under paragraph (5) (A) of this subsection for light-duty vehicles and engines manufactured during model year 1975. (c) Section 202 (b)(1)(B) is amended to read as follows:

"The regulations under subsection (a) applicable to emission of oxides of nitrogen from light-duty vehicles and engines manufactured during model years 1975 through 1981 inclusive shall contain standards which are identical to the standards prescribed (as of December 1, 1973) under subsection (a) for light-duty vehicles and engines manufactured during model year 1975. The regulations under subsection (a) applicable to oxides of nitrogen from light-duty vehicles and engines manufactured during or after model year 1982 shall be established at such level as the Administrator determines is appropriate considering air quality, energy efficiency, availability of technology, cost, and other relevant factors. The Administrator shall publish for public comment no later than July 1, 1977, proposed standards for 1982 model year light-duty vehicles and engines and his tentative conclusions with respect to the matters he is required to consider under this paragraph and shall publish his final standards and his findings no later than July 1, 1978. Such standards may be revised after appropriate notice following such date based upon substantial changes in any of the factors the Administrator is required to consider under this paragraph.

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July 26, 1975

IMMEDIATE RELEASE

Office of the White House Press Secretary

THE WHITE HOUSE

TEXT OF LETTERS FROM THE PRESIDENT TO THE SPEAKER OF THE HOUSE OF REPRESENTATIVES AND THE PRESIDENT OF THE SENATE

July 26, 1975

Dear Mr. Speaker: (Dear Mr. President:)

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As indicated in that message, I have concluded that automobile emmission standards should not be more rigid than those applied to 1975 and 1976 model cars because more rigid standards unnecessarily would increase car prices, reduce gasoline mileage, and increase energy demands. There is also the potential that tighter standards would require emission controls that result in new pollutants with serious health impact.

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I believe it important that the Congress and the public have a full opportunity to hear in detail the findings of our studies and the basis for my conclusions that existing standards should be continued. I recognize that the hearings held by your subcommittee on auto emissions ended before our studies were completed. I urge you to hold another hearing on this matter so Administration witnesses can present the findings.

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FOR IMMEDIATE RELEASE

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

AUTOMOBILE EMISSION STANDARDS

The President today sent to the Congress proposed legislation to continue the present Federal automobile emission standards through the 1981 model year, so as to permit a balance among the important objectives of improving air quality, protecting public health and safety, and avoiding unnecessary increases in consumer costs for automobiles, decreases in gasoline mileage, and increases in the Nation's dependence on imported oil.

The President also asked the Chairmen of the Senate and House Committees which have jurisdiction over the Clean Air Act to hold public hearings so that Administration witnesses can present findings from the executive branch study which led to the President's conclusion that current standards should be continued.

BACKGROUND

- As the Clean Air Act now stands, Federal auto emission standards for 1977 would be tightened from current standards for oxides of nitrogen (NOx), and standards for 1978 model cars would be tightened for hydrocarbons (HC), carbonmonoxide (CO), and still further for oxides of nitrogen (NOx).
 - On June 27, 1975, the President sent to Congress a special message which:
 - . summarized the findings of an extensive executive branch study of the air quality, public health, consumer cost, gasoline mileage, and other implications of alternative emission standards; and
 - . presented his conclusions that the best balance among the various important objectives could be achieved by continuing 1975-76 standards through the 1981 model year.
- . Subcommittees of the Senate Committee on Public Works and the House Committee on Interstate and Foreign Commerce are now considering changes in the Clean Air Act.

THE PROPOSED LEGISLATION

The bill proposed by the President would amend the Clean Air Act to continue 1975-1976 auto emission standards for hydrocarbons (HC), carbonmonoxide (CO) and oxides of nitrogen (NOx) through the 1981 model year. The Federal standards, in grams per mile, would be:

Model Year	HC	CO	NOx
1977 - 1981	1.5	15.0	3.1

For comparison, the average emissions from uncontrolled cars were:

Pre-1968	8.7	87	3.5
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more

(OVER)

Model Year	HC	<u>co</u>	NOx
Past Federal standards hav	e been:		
1970-1971 1972 1973-1974 1975-1976	4.1 3.0 3.0 1.5	34.0 28.0 28.0 15.0	(No standard; emissions rose to 4.5 to 5.0) 3.1 3.1
As the Clean Air Act now s	tands, Fede	eral sta	ndards would be:

1977			1.5	15.0	2.0
1978	and	later	.41	3.4	. 4

THE EXECUTIVE BRANCH STUDY

The interagency study considered the air quality, health, consumer cost and energy impacts of various alternative emission standards that could be applied to 1977 and future model cars. The alternative standards considered in the study ranged from standards less stringent than the current ones (i.e., Canadian standards and 1973-74 U.S. Standards) to those now prescribed in the Clean Air Act for 1978 and future years. In summary, the principal conclusions from the interagency study were:

- 1. Controls on automobiles necessary to meet the current standards have reduced ambient concentration levels in those areas that have auto-related HC and CO problems; and have reduced the rate at which NOx concentrations have increased.
- 2. Through the year 1985, tighter or looser standards for HC, CO and NOx, in the range considered, would make little difference in the air quality in those areas that have an auto-related pollution problem. Many parts of the country have no auto-related pollution problem.
- 3. Present data are not sufficient to make specific calculations or final judgments on what sulfuric acid emission levels would be safe from a public health perspective. However, it is believed that sulfuric acid emissions could prove to be a significant public health risk and that emissions could increase substantially if standards more stringent than the 1975-1976 standards are adopted.
- 4. Further mandated reductions in emissions from automobiles may have the effect of increasing or creating pollutants other than HC, CO, and NOx.
- 5. Auto emission standards have had an impact on fuel economy and, therefore, on our nation's total petroleum demands and reliance on foreign sources. Standards tighter than the 1975-1976 standards will result in higher initial car costs and higher operating costs.
- 6. The basic philosophy and approach to future auto emission controls need to be reconsidered in light of current conditions.
 - (a) Significantly tighter standards at this time may preclude continued development of some promising fuel efficient and low emission technologies.
 - (b) Actions to reduce auto emissions must take into account other sources of the same pollutant.
- 7. Prompt Congressional action is needed on auto emission standards in order to establish a five-year emission program which is compatible with a strict fuel efficiency program.

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SUBCOMMITTEE ON PUBLIC HEALTH AND ENVIRONMENT

DATE: August 20, 1975

DRAC.

SUBJECT: SUBCOMMITTEE DECISIONS ON CLEAN AIR ACT AMENDMENTS

- To date, the Subcommittee has considered sections 101-107 of the June 16, 1975, Staff Discussion Draft of the Clean Air Act Amendments of 1975. Amendments have been offered and voted upon and sections 101-105, as amended, have been adopted by the subcommittee. When the recess began, the subcommittee had not completed consideration of section 107.
- 2. Thus, the first item for consideration when the subcommittee returns will be the ozone protection provision. Thereafter, the subcommittee will consider section 108 of the Staff Draft ("Prevention of Significant Deterioration"), section 201 (Indirect Sources), section 202 (Delay of Transportation Control Requirements), section 203 (New Motor Vehicle Emission Standards). Other major issues which the subcommittee has yet to resolve relate to the 5 year/50,000 mile performance warranty and its effect on aftermarket parts and service industry; and the procedural requirements for EPA rulemaking under the Clean Air Act.
- 3. The following summarizes in general the major actions taken by the subcommittee to date:
 - A. <u>Section 101 Unreculated Pollutants</u> This section was adopted with the following changes:
 - i. Adopted the words "may endanger public health or welfare";
 - ii. Required EPA to study health effects of sulfates, cadmium, arsenic, polycyclic organic matter, and vinyl chloride;
 - iii. Required EPA to promulgate a one-hour NO2 ambient air quality standard.
 - B. Section 102 Basis of Certain Administrative Standards -This section was adopted using the "may endanger public health or welfare".

Section 103 - Compliance Date Extensions Under State Plan - This section was adopted with the following changes:

 Authorized extensions to be granted for plants using innovative technology which would result in substantial emission reductions or in substantial energy savings;

ii. Prohibited use of compliance orders as a means of postponing compliance deadlines;

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- iii. Certain other minor and clarifying changes.
- D. Section 104 Assessment of Civil Penalties This section ' was adopted with the following changes:
 - Limited the venue in which EPA may bring enforcement lawsuits;
 - ii. Required the court, in assessing civil penalties, to take into account the size of the business, the economic impact of the penalty, and the seriousness of the violation;
 - iii. Deleted the provision limiting applicability of State or local corporate immunity laws.
- E. Section 105 Excess Emission Penalty A substitute for this section was adopted. It authorized administrative imposition of excess emission penalties under the following conditions and limitations:
 - i. Only major sources receiving compliance date extensions (see sec. 103) may be subject to the penalty;
 - ii. Only if a source is primarily responsible for the condition which necessitated the delay in compliance may the source be subject to the penalty;
 - iii. The decision as to whether a major source is subject to the penalty will be made at the same time as, and after a formal adjudicatory hearing on, the compliance date extension decision.
 - iv. The penalty may be less than, but may not exceed \$5000, day;
 - v. The source may obtain judicial review of any penalty in the appropriate Federal District Court;
 - vi. The penalty is to be paid to the U.S. Treasury.

- E. Section 106 Compliance Date Extensions for Coal Conversion - This section was adopted with the following changes:
 - i. The language making EPA's extension authority disretionary instead of mandatory was deleted. Instead, EPA will be required, as in existing: law to grant an extension of compliance deadlines for sources ordered to convert to coal if certain findings can be made, except that the Administrate is given authority not to grant an extension if he finds it "may result in a significant danger to public welfare" (including sensitive crops, touris etc)
 - .ii. The prior approval of the Governor of the State in which the plant is located is required as a condit precedent to EPA's granting an extension of the State's federally-approved compliance deadline for sources ordered to convert to coal.
 - iii. Sources are prohibited from receiving credit to relax emission limitations to the extent that the source decides to raise stack heights above good engineering practice; "good engineering practice" is defined.
- F. Section 107 Ozone Protection This section has not been adopted or rejected to date. However, tentative agreement was reached with the Subcommittee from Science and Technology to change the provisions of section 107 as follows:
 - i. To include more detailed research instructions to EPA and other Federal agencies;
 - ii. To require completion of the study not later than two years after enactment;
 - iii. To delete the provision requiring sharing of the Federal research costs by affected industry;
 - iv. To authorize EPA to regulate substances which may endanger ozone, subject to disapproval by either House of Congress, instead of only with prior approval by both houses.

This tentative agreement is not binding on the Subcommittee or Public Healt! and Environmen., but is subject to continued deliberation when the Subcommittee returns.

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SUMMARY OF SUBCOMMITTEE ACTION ON PREVENTION OF SIGNIFICANT DETERICRATION

- Each state must classify its areas into Class I, II, or III, for all pollutants for which national standards have been established. However, for any pollutant other than SO2 or Particulates, a state may prevent significant deterioration without use of an area classification plan if the Administrator determines that the purposes of this section are effectively fulfilled.
- 2) Allowable Pollution Increments and Allowable Pollution Ceilings:

Allowable Increments	Allowable Ceilings
<pre>2% of lowest national standard 10% of lowest nat'l. std. for particulate</pre>	75% of lowest nat'l. std.
25% of lowest nat'l. std.	75% of lowest nat'l. std.
	<pre>2% of lowest national standard 10% of lowest nat'l. std. for particulate 25% of lowest nat'l.</pre>

- Class III 50% of lowest nat'l. 75% of lowest nat'l. std. std.
- Lands receiving Automatic Class I designation. The following which exceed 1000 acres: National Parks, National Wilderness Areas, International Parks, National Wildlife Refuges, National Monuments and National preserves.

States and localities shall give special consideration to classification of Class I of all areas of special environmental concern such as national forests, national recreation areas, national lakeshores and seashores.

The following units exceeding 1000 acres may not be Class III: !

Wild and Scenic Rivers National Lakeshores or Seashores National Forests

- Designation or Redesignation is to be carried out
 a) by State or local government
 - b) with approval by State legislature and by local governmental units representing majority of people in area effected
 - c) after public hearing and description, analysis and

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examination by redesignating authorities of all health, environmental, economic, social and energy effects of the proposed classification.

- 5) Administrator may require up to one year of continuous air quality monitoring preceding the application for a construction permit in order to establish air quality baselines.
- 6) EPA may disapprove a designation or redesignation only if he finds such designation or redesignation does not meet the requirements of this section.
- 7) A "major stationary source" is required to obtain a permit to construct. A "major stationary source is defined as 'any stationary source of air pollutants which emits, or has design capacity to emit 100 tons per year or more, of any pollutant for which a national ambient air quality standard is promulgated under this Act."

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 - 1. The language making EPA's extension authority disretionary instead of mandatory was deleted. Instead, EPA will be required, as in existing: law to grant an extension of compliance deadlines for sources ordered to convert to coal if certain findings can be made, except that the Administrate is given authority not to grant an extension if he finds it "may result in a significant danger to public welfare" (including sensitive crops, touris etc)
 - .ii. The prior approval of the Governor of the State is which the plant is located is required as a condit precedent to EPA's granting an extension of the State's federally-approved compliance deadline for sources ordered to convert to coal.
 - iii. Sources are prohibited from receiving credit to relax emission limitations to the extent that the source decides to raise stack heights above good engineering practice; "good engineering practice" is defined.
- F. Section 107 Ozone Protection This section has not been adopted or rejected to date. However, tentative agreement was reached with the Subcommittee from Science and Technology to change the provisions of section 107 as follows:
 - i. To include more detailed research instructions to EPA and other Federal agencies;
 - ii. To require completion of the study not later than two years after enactment;
 - iii. To delete the provision requiring sharing of the Federal research costs by affected industry;
 - iv. To authorize EPA to regulate substances which may endanger ozone, subject to disapproval by either House of Congress, instead of only with prior approval by both houses.

This tentative agreement is not binding on the Subcommittee or Public Healt! and Environmen., but is subject to continued deliberation when the Subcommittee returns.

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SUMMARY OF SUBCOMMITTEE ACTION ON PREVENTION OF SIGNIFICANT DETERICRATION

- Each state must classify its areas into Class I, II, or III, for all pollutants for which national standards have been established. However, for any pollutant other than SO2 or Particulates, a state may prevent significant deterioration without use of an area classification plan if the Administrator determines that the purposes of this section are effectively fulfilled.
- 2) Allowable Pollution Increments and Allowable Pollution Ceilings:

	Allowable Increments	Allowable Ceilings
Class I	2% of lowest national standard 10% of lowest nat'l. std. for particulate	75% of lowest nat'l. std.
Class II	25% of lowest nat'l. std.	75% of lowest nat'l. std.

- Class III 50% of lowest nat'l. 75% of lowest nat'l. std. std.
- 3) Lands receiving Automatic Class I designation. The following which exceed 1000 acres: National Parks, National Wilderness Areas, International Parks, National Wildlife Refuges, National Monuments and National preserves.

States and localities shall give special consideration to classification of Class I of all areas of special environmental concern such as national forests, national recreation areas, national lakeshores and seashores.

The following units exceeding 1000 acres may not be Class III:

Wild and Scenic Rivers National Lakeshores or Seashores National Forests

- 4) Designation or Redesignation is to be carried out
 a) by State or local government
 - b) with approval by State legislature and by local governmental units representing majority of people in area effected
 - c) after public hearing and description, analysis and

examination by redesignating authorities of all health, environmental, economic, social and energy effects of the proposed classification.

- 5) Administrator may require up to one year of continuous air quality monitoring preceding the application for a construction permit in order to establish air quality baselines.
- 6) EPA may disapprove a designation or redesignation only if he finds such designation or redesignation does not meet the requirements of this section.
- 7) A "major stationary source" is required to obtain a permit to construct. A "major stationary source is defined as 'any stationary source of air pollutants which emits, or has design capacity to emit 100 tons per year or more, of any pollutant for which a national ambient air quality standard is promulgated under this Act."