

Public Hearing

before

SENATE ENVIRONMENT COMMITTEE and ASSEMBLY ENVIRONMENT COMMITTEE

"A briefing from officials of the United States Environmental Protection Agency and the New Jersey Department of Environmental Protection and Energy concerning New Jersey's responsibilities to implement and comply with the requirements of the 1990 amendments to the Federal Clean Air Act"

LOCATION: Committee Room 8
Legislative Office Building
Trenton, New Jersey

DATE: April 2, 1992
10:15 a.m.

MEMBERS OF SENATE COMMITTEE PRESENT:

Senator Henry P. McNamara, Co-Chairman
Senator Randy Corman, Vice-Chairman
Senator Louis C. Bassano
Senator Jack Sinagra
Senator John H. Adler
Senator Ronald L. Rice

MEMBERS OF ASSEMBLY COMMITTEE PRESENT:

Assemblywoman Maureen Ogden, Co-Chairman
Assemblyman David C. Russo, Vice-Chairman
Assemblywoman Rose M. Heck
Assemblyman Lee A. Solomon
Assemblyman Jeff Warsh
Assemblyman David C. Kronick

ALSO PRESENT:

Raymond E. Cantor
Office of Legislative Services
Aide, Senate Environment Committee

Jeffrey T. Climpson
Office of Legislative Services
Aide, Assembly Environment Committee

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NOTICE OF JOINT PUBLIC HEARING

The SENATE ENVIRONMENT COMMITTEE and the ASSEMBLY ENVIRONMENT COMMITTEE will hold a joint public hearing on the following matter:

The committees will receive a briefing from officials of the United States Environmental Protection Agency and the New Jersey Department of Environmental Protection and Energy concerning New Jersey's responsibilities to implement and comply with the requirements of the 1990 amendments to the federal Clean Air Act.

The joint hearing will be held on Thursday, April 2, 1992 at 10:00 A.M. in Room 8, Legislative Office Building, Trenton, New Jersey.

The public may address comments and questions to Raymond E. Cantor, Jeffrey T. Climpson, Judith L. Horowitz, or Spiros J. Caramalis, Committee Aides, or make scheduling inquiries to Elva Thomas or Carol Hendryx, secretaries, at (609) 292-7676.

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SENATOR HENRY P. McNAMARA (Co-Chairman): Good morning. I would like to welcome you to the joint meeting of the Senate Environment Committee and the Assembly Environment Committee on the Clean Air Act and its effect on the State. I am pleased to participate with our colleagues from the Assembly, especially Chairwoman Ogden. We have asked the Commissioners of Health, Environmental Protection, Transportation, and Commerce, as well as representatives of the U.S. EPA, to provide us with a briefing on the Clean Air Act amendments. Perhaps no other Federal environmental statute will have a greater impact on the life-styles of our residents over the next decade and beyond.

It is for this reason that we have convened a joint meeting. As stated at the first meeting of the Senate Committee, while I understood that the Department was proceeding with its end of Clean Air Act responsibilities, I viewed the development of policy regarding the State's response to the Federal Act as the prerogative of the Legislature. I still do. That is why this briefing and the meeting scheduled for the 9th of April is so important. We will, with the assistance of the executive branch of government and the many interests affected by the implementation of that policy, have to make hard decisions. I look forward to the challenge.

Assemblywoman Ogden?

ASSEMBLYWOMAN MAUREEN OGDEN (Co-Chairman): Thank you very much, Senator McNamara. I, too, would like to welcome everyone here this morning. I'm glad it was possible to have a large enough room for most of the people. I certainly thank Senator McNamara and his associates on the Senate side, and my colleagues on the Environment Committee of the Assembly, for being here this morning to convene this joint meeting.

It is an unusual event to have a joint hearing, but I think it just underscores the importance of the issue on which we are receiving testimony this morning, next Thursday, and

possibly a third hearing, if that will be necessary, on the 1990 Clean Air Act amendments and their impact in the State of New Jersey. We are aware that the impact of the 1990 amendments to the Clean Air Act will have a very significant impact on New Jersey citizens and on the businesses located in the State.

This morning, the two key regulatory agencies -- the Federal EPA and the State DEPE -- have been invited to testify about the regulations that both agencies are requiring for a nonattainment State like New Jersey, one that exceeds the standard for air quality. Most of our State has a moderate or severe problem with ozone and carbon monoxide that result from motor vehicle emissions. It is clear that action must be taken to remedy this unhealthy condition.

The purpose of these hearings is to explore the options available to New Jersey. We are aware that the DEPE Commissioner, Scott Weiner, has promulgated a rule that commits our State to the California standard, which is more strict than the Federal law. That will basically be the subject of our next Thursday hearing, rather than today's, but I certainly would be remiss if I didn't mention it.

Overall in terms of the proposed changes, what will be the cost to business of meeting the air standard? What will be the cost to the citizens of New Jersey? What will be the benefits? What are the penalties if New Jersey fails to make the necessary progress toward reducing air pollution? Despite the real dollar costs attached to meeting the strict standards, can our population afford the price of unhealthy air?

Speaking for the members of the Assembly Environment Committee, I know we are looking forward to the presentations by government, business, organizations, and individuals, in order to make ourselves knowledgeable about this very important subject, and thereby become advocates for a policy that is most appropriate for the citizens of New Jersey. Thank you.

Are there any other comments that members of the Senate or Assembly Committees wish to make at this time? (no response) If not, I would like to call the first two speakers representing EPA Region II, Conrad Simon, who is the Director of the Air and Waste Management Division, and William Baker, who is the Chief of the Air Programs Branch.

C O N R A D S I M O N: Thank you very much. Good morning, Senator McNamara; good morning, Assemblywoman Ogden, and members of the Legislature. My name is Conrad Simon and, as mentioned, I am the Director of Air and Waste Management for Region II of the Environmental Protection Agency. That Region deals with New York, New Jersey, Puerto Rico, and the Virgin Islands. I have with me William Baker, who is the Chief of the Air Programs Branch, and it is the staff in his group who will be dealing directly with our review and comments on any plans developed by the State of New Jersey in response to the Clean Air Act requirements.

I am very pleased to have this opportunity to be with you to present testimony on behalf of EPA with respect to the Clean Air Act. The portions of the Clean Air Act which are perhaps most pivotal in getting the law passed, are the Acid Rain titles -- or, the Acid Rain title. In that title the Congress created a market-based plan to reduce emissions of sulfur dioxide by 50 percent nationally from 20 million tons per year in the mid-1980s to 10 million tons per year by 2010. The electric power plants that will bear the brunt of that program are located primarily in the midwest. That will have a lot of benefit for New Jersey, and some impact on a plant in New Jersey that will be in that program.

The provisions which will have the greatest impact on New Jersey, however, are those dealing with the control of mobile sources, the establishment of a Federal operating permit program, and the establishment of a new air toxics control

program based on the use of something that we define as "maximum achievable control technology standards." Those are higher than the standards we have in place now.

In order to address reductions in mobile sources, the Congress has established stringent new tail pipe standards for automobiles. It has also directed EPA to establish new guidelines for states to use in developing enhanced inspection and maintenance programs for addressing releases from in-use vehicles for metropolitan statistical population centers of greater than 200,000 people in areas classified as serious, severe, or extreme, and in areas with a population of 100,000 or more in what we define as the "ozone transport region," which I will comment on a little bit later.

This inspection/maintenance program is a very important provision for the State of New Jersey, where over the past several years the inspection/maintenance program for in-use vehicles has been substandard. EPA has developed a proposal for a "high-tech" -- that is a quote that we use to refer to this new program -- centralized system using a dynamic test mode and a pressure test procedure that will provide a high degree of emissions reductions. New Jersey would do well not only to adopt this type of program in a timely fashion, but to implement a program which would provide the greatest amount of emissions reduction obtainable under that system.

Under the amendments, major sources must obtain renewable operating permits and pay an emissions-based fee of a minimum of \$25 per ton. These are major sources and any other sources otherwise controlled under the law. There are new definitions of what constitutes a major source. The more severe the pollution problem, the smaller the size of the source labeled as major. So different sizes of industries would be regulated depending on how severe the pollution problem is at the time. I will address that a little bit more later.

States that obtain authorization to operate this permit program will have to dedicate the permit fees they collect to operating the controlled program for stationary sources, but not for automobiles. States with a significant mobile source problem, as New Jersey has, will need to find other means besides -- perhaps in addition to existing means for supporting, or for funding the program -- the expanded program as it comes up in future years. States that fail to accept the Federal operating permit program will be subject to a limitation restricting the growth of new industrial sources in the State and the possible cutoff of highway funds. If, by the way, EPA implements the program, the funds do not come back to the environmental agency, but would go into the Treasury, so there are double reasons why a state should want to assume that program.

Therefore, because of that importance, it is very important that the Legislature and the Department of Environmental Protection and Energy take action to obtain whatever legal authorities are necessary to implement that program.

With respect to the air toxics program, the amendments have established a new method for dealing with air toxic pollutants that would overcome the existing, or the past unworkable and cumbersome procedures which were existing under the old law. Under these amendments, EPA would establish maximum achievable control technology standards for 180 industrial source categories and 189 different pollutants. These standards will be developed based on the emission reductions achieved employing the best of existing demonstrated technology. As new technologies are developed, they will become in the future the new standards for sources, and so on and so on. This provides a mechanism that encourages industry to seek new technology to reduce our air toxics.

I will skip some of the material in order to get to some of the key points earlier.

The amendments provide a scheme for classifying the country in air quality terms on a pollutant by pollutant basis. Under that scheme, all of New Jersey is classified as attainment for particulate matter -- what used to be dirt or soot and the combination of those things -- for lead, attainment for lead, and attainment for oxides of nitrogen. All of New Jersey is also attainment for sulfur dioxide, except for small portions of Warren County, which were determined to be nonattainment for that pollutant. Those areas are predominantly impacted by power plants in Pennsylvania, and we have negotiated a two-year study that is underway now to determine what those plants need to do to improve and protect the air quality of New Jersey.

Most residents of New Jersey, however, continue to be exposed to unhealthful levels of ozone. We sometimes call it "urban ozone," not to be confused with the ozone layer 15 to 18 miles up in the sky. A significant number of New Jersey residents are also exposed to what we define as "moderately unhealthful levels of carbon monoxide," despite the considerable investment that has been made in pollution reduction activities in this State over the years. I am almost reluctant to call it moderately unhealthy, because how can you talk of something unhealthy being moderate, or anything else than unhealthy.

Carbon monoxide problems are more localized in nature, with exceedances of the standards occurring primarily in the vicinity of heavily trafficked and congested roadways in northern New Jersey. Exceedances of the carbon monoxide standards are of concern to us because uptake of carbon monoxide by the blood disrupts the delivery of oxygen to the body's tissues and organs. This effect is especially harmful to people who suffer from cardiovascular diseases.

Over the past few years, New Jersey has experienced improvements in carbon monoxide pollution levels. These can be attributed to the improvement in tail pipe emission performances, or emission releases from new automobiles. As new automobiles replace old automobiles, this condition has been improving, but there are only a few more years where that condition will continue in that manner. In fact, because we have been continually increasing the use of automobiles -- what we call "vehicle miles traveled," we have been increasing the number of miles that we travel and the frequency of the use of automobiles -- that impact is offsetting the beneficial impact of the cleaner car. We anticipate before the turn of the century, that without other things happening, the improvement trend will turn to a deterioration trend.

Our observations show that all residents of New Jersey are exposed to unhealthful concentrations of urban ozone. Ozone, or "smog," as it is commonly known, especially on the West Coast, attacks the lung tissue and the respiratory system and, even at low concentrations, reduces the ability of our lungs to function effectively. Individuals with impaired respiratory systems, such as asthmatics, are most severely affected by this pollutant. However, even the health of healthy children and adults has been determined to be impaired by high concentrations of ozone. This pollutant is estimated to cause some \$2 billion worth of damages to commercial crops and forest in the United States annually. It has had, and undoubtedly will continue to have, its effects on the agricultural industry of New Jersey.

Over the past five years, there have been 143 days when at least one site in the entire State exceeded health standards for ozone. The vast majority of these violations occurred between Memorial Day and Labor Day. There were many other days during this period when ambient ozone levels, while not exceeding the Federal standard, were only slightly below

it. There are many reputable health experts who say that this should also be a cause of concern.

We in the EPA are concerned that emissions from sources in New Jersey travel downwind from New Jersey to states such as New York, Connecticut, and other parts of New England to cause unhealthful levels of ozone in those states. In fact, concentrations of ozone in southern Connecticut are the highest observed outside of California and exceed the Federal health standards by 70 percent. Much of this problem can be attributed to emissions from New Jersey and from New York. Downwind states cannot do enough by themselves to attain ozone standards for their own residents without major emission reductions being made by New Jersey. Let me say, though, that it is also true that a portion -- a significant portion -- of the pollutants that cause ozone standards not to be met in New Jersey, are caused by emissions that come from other states. Those states are south of us and to the west of us.

The 12 New Jersey counties in the greater New York metropolitan area are classified as Severe II Nonattainment for ozone because their air quality design value is between .28 parts per million and .19 parts per million. The six counties comprising the greater Philadelphia area are classified as Severe I -- not quite as polluted -- because their design value is between .19 and .18 parts per million. The Atlantic City area is classified as Moderate, with a design value between 1.38 and -- I'm sorry, .138 and .160 parts per million, and Warren County, which is part of the Allentown/Bethlehem/Easton metropolitan area, is classified as Marginal, with a design value between .121 and .138 parts per million. Let me make sure that I-- In all the numbers I have been giving you, they should all read zero point whatever the number is that I quoted, in case I made a mistake anywhere else.

The Clean Air Act is particularly realistic -- or attempts to be anyway -- in that it sets different timetables

for attainment of the standards for each type of area I have identified. For example, the attainment date for the northern counties is the year 2007. The attainment date for the Philadelphia area counties is the year 2005. But, to ensure that substantial early reductions in emissions and substantial progress toward attainment occur, the Clean Air Act amendments have set specific requirements for all ozone nonattainment areas which they must meet by certain dates. A key early date is November 15, 1992 -- this year. It also sets a number of specific activities that should be carried out by the State in meeting those standards.

I'll skip a little and get to identifying some of these items a couple of pages on.

Of the 12 key things that have to be submitted:

First, New Jersey was required by May 15 last year to submit regulations that would correct deficiencies and shortcomings in existing requirements for the control of volatile organic compounds. That is the primary thing we use to keep ozone levels down. The State did not provide the corrections on time, and the sanctions process -- which I will mention later -- started its course. It has an 18-month course, but this is not unusual; a large number of states have that problem. DEP has worked aggressively on correcting the problems, and just early last month submitted corrective regulations on those items. We anticipate that in a short while we will be able to approve those submittals and stop the sanctions process from going forward.

The second item: New Jersey is required to submit an enhanced I/M program by November 15, 1992 -- this year. Because of a number of delays, which I am sure you are familiar with, in getting some of the guidances out, the agency has determined that a commitment and the timetable for implementing the program would be acceptable this November, but the

commitment to the program must be there and the type of program that is being committed to, must be understood.

Thirdly, by November this year, New Jersey is required to adopt regulations which require reasonably available controlled technology -- which we call RACT -- for certain major sources of volatile organic compounds that were not previously regulated. In this case, this might not be a major job for the agency because this State, along with New York and California, has had to regulate smaller sources and smaller sources than many other states before, because of early recognition of the problem. But still, there is a requirement to cover the entire spectrum.

Fourthly, by November of this year, the amendments require the State to adopt regulations requiring reasonably available control technology for major sources of oxides of nitrogen, or NO_x , thereby treating them in the same manner as major sources of hydrocarbons. This is a new area of endeavor.

Fifth, the amendments require that by this year New Jersey have in place regulations governing the approval of new industrial plants -- what we call "new source review regulations" -- for volatile organic compounds, for oxides of nitrogen, and for carbon monoxide emissions -- by November, again of this year. Note that carbon monoxide air quality is primarily caused by automobiles operating on streets and highways, but plants' combustion facilities do emit volumes of carbon monoxide which do have some impact and which are controlled under the law.

The amendments spell out-- The amendments which New Jersey must submit under the new source review program must spell out specific definitions of what would constitute major sources of VOCs, major sources of NO_x , major sources of carbon monoxide as guided under the Act, and what offset ratios -- this is a very important aspect -- they must achieve when locating in a nonattainment area. New Jersey will also need to

correct deficiencies that exist in its new source review regulations currently that allow the State to postpone the timetable by which resource recovery plants were required to achieve offsets for their emissions. That correction must be submitted this year.

Sixth, New Jersey must have in place by November 15, regulations requiring that automotive fuels sold in New Jersey -- in the New Jersey portions of the New York metropolitan area, those northern counties, and in the New Jersey portion of the Philadelphia consolidated statistical area -- during those portions of the year when carbon monoxide levels are high and violations occur -- generally between October and April -- that those fuels be oxygenated, have the capacity for more oxygen in them.

In the northern portion of the State -- as I mentioned -- the period is October 1 through April 30. In the southern part of the State, that period could be November 1 through February 28. I understand the State is still considering whether it will have one consistent period for the entire State.

These fuels which are sold during that period must have an oxygen content of at least 2.7 percent. We anticipate that the use of those fuels will result in an approximate 20 percent reduction in air quality emissions of carbon monoxide.

Seventh, by November 1992 -- this year -- New Jersey must have in place a mechanism for revising its criteria and procedures for determining the conformity between the State implementation plan and the transportation plans developed and carried out by the Transportation agency. This mechanism will need to mirror information that will be contained in EPA regulations that will hopefully be available later this year, that will result from negotiations between EPA and the U.S. Department of Transportation as to what those mechanisms should be.

The important thing, though, is that in the future, based on this law, transportation programs and transportation plans that conform to an air quality plan must be such that they cannot cause any net increase in emissions from automobiles that use the system.

Eighth, by November this year, areas that are classified moderate, severe, or extreme for ozone, must adopt a regulation requiring Stage II vapor controls at service stations. I mention that because I know that has been a problem of concern in the past, when in 1988 New Jersey adopted regulations doing that. You know, there was good foresight there, because now it is required for areas which are not only severe and extreme, but also areas that are moderate across the country.

Tenth (sic), New Jersey must adopt, by November 1992 -- this year -- a program requiring employers of 100 or more persons in those sections of the State which I previously identified as being severe -- the New York metropolitan and the Philadelphia consolidated metropolitan areas -- to develop and implement plans to effectuate a 25 percent increase in the average vehicle occupancy for all commuting trips which end at the workplace between 6:00 and 10:00 a.m. daily. Employers are to submit their plans to the State by November 1994 and demonstrate compliance by November 1996.

Eleventh, New Jersey must have in place this year transportation control measures. They must have the authority to do them and the measures that will be used; even though not put in place, not implemented, but the authority and the regulations must be there to offset growth in vehicle miles traveled that might go beyond what allows the State to make the necessary progress, or the planned progress in achieving reductions in emissions from hydrocarbons -- actually, let me use the term "volatile organic compounds" -- and to offset the

growth that might occur in those emissions due to vehicle miles traveled.

As I mentioned a little earlier, we anticipate that if nothing happens, that just growth in vehicle miles traveled would cause a change in the direction of the improvement curve that we are getting by just having cleaner automobiles replacing old automobiles.

Finally, in terms of those mandatory things that must be done, New Jersey must prepare comprehensive inventories of emissions of volatile organic compounds and oxides of nitrogen by this year -- by November 15 of this year. These inventories are necessary in determining the areas in which emissions reductions will be available, and the types of sources which will provide the best kinds of emissions reductions. These inventories will also be used officially to track the State's progress, or lack thereof, in reducing emissions from sources of those compounds. And I am going to tell you about those requirements for maintaining that steady progress.

But, let me comment here: In order to enable the State to address these requirements, there is a need for the State to build up its staff and to increase its staff's capabilities to develop and implement the program. We are concerned that New Jersey may be falling too far behind in assembling the planning staff, in obtaining new legal authorities, in developing and implementing regulations, and in obtaining the resources necessary to administer the program.

Now, we might not be aware of some of the information that the agency might have, but we do see other states not far away doing things which help them to gear up to meet their requirements. For instance, just a couple of weeks ago, the State of Virginia announced that they were providing a 50 percent increase in the staff resources that would be available to the air pollution control agency, because that kind of level

of resource increase was necessary to carry out the Clean Air Act amendments.

EPA has tried to do its best to provide additional funding, and has gone to the Congress. Over the last three years, the national grant amount went from \$100 million a year up now to \$160-odd million a year. This is granting aid to the states to help them to do the job. States, themselves, need to provide increased contributions to their agencies to get that job done.

Obviously, if the State were to implement the permit program which has a permit fee attached to it-- If they were to implement that program earlier than is required by the law -- and the law allows that to happen -- then that would be a potential source of funds for carrying on the program.

Let me leave the comments on sanctions for just a minute or two, and get to the problem of long-term planning. Under the amendments, a severe ozone area is required to achieve a minimum reduction of 15 percent in the emissions of ozone-forming VOCs -- volatile organic compounds -- in the first six years after enactment of the law -- so therefore by 1996 -- and 3 percent per year thereafter. Failing to achieve this goal leads to the imposition first of contingency measures which are to go into effect with no further action by the State or the EPA -- they would have to be on the shelf and available to go -- and which are to provide sufficient emissions reductions to make up what might be the shortfall in that 3 percent per year.

Notwithstanding this requirement, a state must achieve compliance with the standard in a severe area in 17 years. I mentioned that in the northern part of the State by the year 2007. In meeting the minimum standard, New Jersey would have to achieve a 48 percent reduction in those compounds in those 17 years. However, if the air quality levels in the State, especially that portion of the State, dictated a need for a 50

percent, a 60 percent, or a 70 percent reduction in emissions, the State would be sanctioned if it only achieved the 48 percent that is required in the minimum rate of emissions reduction.

This would therefore necessitate the State implementing additional optional strategies sufficient to result in the needed reductions, whatever we determine those reductions need to be. The plan which demonstrates the amount of control necessary to attain the standard by the deadline, and the schedule for meeting the interim remission reduction goals are required to be submitted by the State by November 1994. That is what we call the "Demonstration of Attainment Plan." That must be there in '94. That is over and above what has to be provided now in November 1992.

I would like to repeat here, that one measure that offers great opportunity for cost-effective emissions reductions is the automobile inspection and maintenance program, as defined in the high-tech system that has been defined and described by EPA. We have not yet defined the bright line where the official requirement called "enhanced I/M" would occur. Those states that have a reluctance to have a 100 percent centralized system under what we expect the final rules to be, will probably be able to have some portion of the system decentralized, provided that that decentralized portion would be stations, or centers, that do inspections only.

We, therefore, would encourage the State, should that bright line for enhanced I/M be drawn at some level lower than the maximum that could be obtained-- We would encourage the State of New Jersey to go after the maximum, because this is a strategy that provides emissions reduction at a very cost-effective rate, in a very cost-effective way.

Another measure which will come into place in New Jersey which will provide cost-effective and timely emissions reduction is a measure called "reformulated gasoline," or a

strategy -- a type of gasoline called reformulated gasoline. The sale of this fuel is specifically required by the amendments in the New Jersey portions of the New York area and the New Jersey portions of the Philadelphia area. The Department of Environmental Protection and Energy has already moved to adopt -- sorry, moved to opt the remaining three counties of the State into this program. It is a program that EPA would implement and the State can opt in for those portions that don't have to be covered on a mandatory basis. This program would go into effect in January of 1995.

Reformulated gasoline will provide a 15 percent reduction in the emissions of volatile organic compounds. In addition to reductions in VOC, reformulated gasoline will also provide for reductions in emissions of benzene and other toxic materials, and toxic substances reduction is a very, very important thing that needs to happen in most metropolitan areas in the United States, and here in New Jersey, as well. The sale of this fuel is expected to have some cost increase associated with it.

So, the Clean Air Act requires expeditious adoption of measures and strategies to reduce emissions and attain healthful air quality. Section 110 talks of attaining standards as expeditiously as practicable. New Jersey will be highly dependent on actions by upwind states to reduce their emissions in order to provide for attainment of ozone standards in New Jersey. New Jersey, in turn, will have to control emissions beyond those needed for attainment in New Jersey, in order to provide for attainment in downwind states, such as Connecticut and the New England states.

Recognizing the interdependence between the states in the Northeast, the Northeast states have been working together to fashion solutions to their ozone problems under a provision in the law provided by Congress calling for the formation of the Northeast Ozone Transport Commission. That Commission has

been at work since last May, and has developed a number of agreements and proposals that would move towards having joint activities in meeting the standards in a similar fashion throughout the Northeast states.

If New Jersey is to achieve what we anticipate is going to be the need for something more than 50 percent, 60 percent, or 70 percent reductions in emissions of volatile organic compounds, and perhaps similar reductions in oxygenated (indiscernible), it will have to implement reduction measures above those that I mentioned earlier as the mandatory measures required for this year, and those regional measures which the Federal government will implement.

We believe New Jersey can do this most effectively working in concert with the states in the Northeast Ozone Transport Commission, and by having as active a participation in that Commission's activities as possible.

Just a final sentence or two: I would be remiss, I think, if I did not mention the issue of sanctions, even though it is a distasteful term to talk about and to use. The new law provides for the imposition of sanctions for failure to plan and for failure to implement. Sanctions are mandatory, and the first available sanction would take place 18 months after EPA makes a finding that the State has failed to meet a deadline or milestone. The second sanction would take effect six months thereafter, or 24 months after the finding of the State's failure.

Two available sanctions are an increase in the offset ratio that a new source would have to use if it were to be located in a nonattainment area, what would be a 1.2 or 1.3 to 1 ratio to a 2 to 1 ratio. A second sanction would be the cutoff of highway funds. The system also allows the State to be sanctioned with a reduction in the Federal funding available for the State to carry out its program, but that is a sanction which we would be very reluctant to have to implement.

I do appreciate the opportunity to have made this presentation to you. I would be happy to answer any questions you might have. Thank you.

SENATOR McNAMARA: Mr. Simon, in referencing Virginia, their 50 percent increase-- They could have six employees in that particular department and increase it by three--

COMMISSIONER SCOTT A. WEINER: Don't worry; don't worry.

MR. SIMON: They have about 100--

SENATOR McNAMARA: The way I look at it, after the budget cuts that Wilder made in 1990, they would be lucky if they had six in there. New Jersey already has a significant air pollution control program. No doubt we have to do more, but I, you know--

MR. SIMON: Senator, they have about 130 people already in their department, and it is a smaller state than we have here, industrial-wise. But I wouldn't quibble over that issue.

SENATOR McNAMARA: We'll let the Commissioner, Scott Weiner, give the answer about how many we have in that Department at the present time.

MR. SIMON: That's Virginia, I was saying.

SENATOR McNAMARA: I know -- in our Department.

Because of the missing of the rules for volatile organic compounds back on May 15, 1991, does that cause us to have to reach a higher standard? I mean, what is the downside of the fact that we missed that deadline?

MR. SIMON: Those were rules which the State had already committed to implement earlier and, in some cases, the State was implementing the rules, but the rules had loopholes and shortcomings in them. So, to some extent, we were already anticipating that those reductions would be made. One would, yes, get the benefit of having those reductions occur now. It

doesn't really ease the problem of getting there in 2007 that much more.

SENATOR McNAMARA: Okay, but no other sanction-- The problem is, it is going to make it that much more difficult to attain in a timely fashion, the ultimate goal.

MR. SIMON: Since those rules have now been passed, and as those new rules go into effect, it will just take more effort on the State's part. It will require more activity in enforcing them in the near years. Those are things that will have benefit in the near years, not in the after years.

SENATOR McNAMARA: How effective do you feel the vapor controls at service stations are?

MR. SIMON: We believe they are very effective.

SENATOR McNAMARA: Really?

MR. SIMON: That's right, sir.

SENATOR McNAMARA: I think someday I am going to take you for a day's ride, because I am not impressed.

MR. SIMON: We are aware that there are cases where things might not work as effectively as they should, and enforcement can help to deal with their problem. We are pretty sure that thousands of tons of volatile organic compounds have been prevented from getting into the atmosphere because of that system.

SENATOR McNAMARA: But the thousands of tons measured against what the goal was-- You know, is it 50 percent effective, 75 percent, 20 percent?

MR. SIMON: I can't say how effective it is right in New Jersey. I can attempt to develop information on that later for you, but I can't say now.

SENATOR McNAMARA: I would appreciate that. Maureen?

ASSEMBLYWOMAN OGDEN: I just have a couple of questions here, Mr. Simon: First, in connection with the oxygenated fuels, you said the reformulated fuel would probably cost about five cents more a gallon. Do you have a similar

amount of increase for oxygenated fuel, or the fact that there is nothing here-- Does that mean it won't cost any more?

MR. SIMON: I don't have any numbers on that. You know, we always have long arguments with the petroleum industry on what things cost and what they don't. There are some oxygenated fuels being sold right now at comparable prices to nonoxygenated fuels. Ethynyl is used as an additive and that is one way of getting fuels oxygenated. I seem to recall that if anything, we would be talking about one or two cents total difference.

ASSEMBLYWOMAN OGDEN: Is it correct to assume that the cars we are currently driving would not need any modifications to operate with these two fuels you are proposing?

MR. SIMON: We are pretty confident of that. We had a lot of controversy in the first year when such a program was tried in Colorado. That claim of damage to cars disappeared in a hurry.

ASSEMBLYWOMAN OGDEN: Like Senator McNamara, I kind of shutter at the thought of building up the State's staff, as to where the dollars would be coming from. I wonder, with the \$100 million you mentioned in terms of Federal funds to help the states, whether you would be apportioning those funds in a way that would compensate the states that have to do the most work? In other words, I think New Jersey would be pretty close to the top of the list, maybe after California.

MR. SIMON: You're right, yes, ma'am. Already New Jersey has been getting more. Three or so years ago, our support was just over the \$3 million level, and we are up to \$6 million a year. But we are really getting into very high-tech stuff now, very costly things to do, and we recognize that. The more capable the staff is and the more they are ready, the better it is going to be, economically for the State.

ASSEMBLYWOMAN OGDEN: One other thing I would like to bring up: You talked about planning. I realize you are

talking about planning to reduce the emissions. I wonder, in connection with planning that has been going on here in the State of New Jersey for five or six years now -- the State Redevelopment Plan which, among other things, will redirect growth to urban areas and reduce congestion on the roads -- whether a State like New Jersey, if this plan is adopted this year -- whether we will receive credit for that being one of the strategies that we used to reduce pollution?

MR. SIMON: Actually, those were commendable initiatives; very commendable initiatives, the kinds of things that needed to be done in order to get where we're going. Although that planning went on, we still have a long way to go to fully implement the results of the planning. Having growth targeted well-- In fact, one of the things that that planning effort and the new administration in EPA have had a strong feeling toward, is the whole idea of sustainable development; the idea that growth and development can occur and environmental protection can occur at the same time. If you do it wisely and do the planning up-front, it can happen well later.

The trouble is, and what I was trying to allude to here in terms of early activity is, if the rules-- If the legislation comes late, if the rules come late, if people are not empowered early, then you rush to implement, and in the interim you have not just regulators, but actually industry, you know -- industry being uncertain where you are coming from and when you are getting there. We have found, for instance, in the last several months on the Federal side, that the industrial sector has been saying many times that while things are being done for their interest, that certain uncertainties are being created by this, and it makes their life a little more difficult in some ways.

So, the need to do things logically and systematically is very helpful and actually protective, both environmentally and economically.

ASSEMBLYWOMAN OGDEN: What I am specifically looking for is the possibility in the State of New Jersey -- if it does the right thing in terms of land use planning to receive some credit for it?

MR. SIMON: It's hard to answer that by saying that the planning itself provides credit.

ASSEMBLYWOMAN OGDEN: Planning and carrying it out.

MR. SIMON: Carrying out the plan definitely-- I am very confident that we will find significant benefits, emissions reduction-wise, from the results of that planning. Yes, the State will get that credit. We are summing every source of emissions-- You know, we are trying to capture every mile traveled, every automobile used -- in a way, trying to capture that, and to the extent that that is done more efficiently, the benefit will accrue to the program. EPA will give credit for that. Is that a little better?

ASSEMBLYWOMAN OGDEN: Yes. (laughter)

Are there other members who-- Senator Rice?

SENATOR RICE: Yes. Thank you very much.

Let me just right quickly say that I am no great fan of EPA. I spent nine years of my life with the National League of Cities, getting involved in the National Resource Committee as Vice-Chair helping to set policies, and I don't really believe that even with the time frames that are given to states like New Jersey, that we are going to meet those levels you are talking about. But you have logged in sanctions, and that is going to be a great detriment to us.

I happen to come from a district that is in a nonattainment area. What I see here, is that we are talking about dealing with some sources that in a nonattainment area could eventually maybe move industry out of my area because they just can't reach it.

Then we look at the plans. Initially, the State had to submit a plan, which we did submit, and it was approved in a

timely fashion, how we were going to address these things. But that was made under another administration. It was made with different legislators. My feeling is that we need to revisit the plan with this administration and this legislative body, to make sure there aren't any other loopholes and that things are logical and reasonable.

My question to you is: If we were to do that and want to make some changes, will EPA sanction this since you already accepted the initial plan? And about time frames, the things we said we were going to accomplish in a period of time, if we feel we can't meet those time frames, is there any flexibility before we start and get whipped up with sanctions and lose transportation moneys and everything else?

MR. SIMON: Senator, let me comment first that the timetables involved here are all in the law. That is passed by Congress, not the EPA. So we have no say in doing that.

SENATOR RICE: Well, I understand that. There is no flexibility; no waivers, no review?

MR. SIMON: There is no flexibility in the statutory requirements. We believe this law has a lot of benefits, which we didn't go through earlier because of time. But one of the things is that a lot of things are happening nationally. Many of the requirements for new sources, especially for new sources, are national requirements. So an industry will not be able now, as it did 20 years ago, to leave here and go somewhere else and find a haven.

Thirdly, we are more sensitive now to issues, both of economic development, of growth, but also the issue of equity, what happens in different parts of the State and how portions of a state -- or whole communities might have disproportionate impacts of rules. We are trying to work with states to identify those occasions and to find ways to allow the goals to be achieved in an equitable fashion.

Finally, in terms of the old law, or the old plan, everything committed to under the plan, under the old plan, is still required and enforceable today. And, in fact, the law asks for more things. To the extent that the State finds it necessary to change a rule or requirement in either some part or all of the State, it might do so if it finds an alternative way of getting the same kind of benefits. So that is where the flexibility comes in. And, in fact, there are no flexibilities in timetables; there is no flexibility in terms of meeting the standards -- we're talking of people's health, yours and mine -- but in terms of how we go about it, part of the debate that should go on, and will go on in the State, is how -- what strategies are picked to do that. That is another reason why I make this plea. The sooner we get going on it, the better off we will be, because we will have more time to talk.

SENATOR RICE: The final question right quickly: You mentioned this proposal for a high-tech centralized system. Can you elaborate a little bit more? I mean, that is not a means to force us to start to address privatization, is it, because I have a problem with us not putting State workers to work for us? That is not a move-- What is this high-tech centralized system?

MR. SIMON: The centralized system-- The key difference from what we have now is not having the automobiles inspected in the private garage system. The State lane system as exists now, something of that nature, expanded to cover those areas that are now covered by the private automobile system, is the kind of system we are talking about. Because of the types of tests you need to do, they would be more cost-effectively done if you had a system that would allow a large volume of vehicles to move through.

What we are finding is that in addition to what comes out of the tail pipe, we have a lot of leaks in connectors and hoses in the system and the gas tank caps and all of that, that

allow these plumes to come out into the atmosphere. Those things need to be tested for. That is why you need a system that will be able to do it very effectively. It could be run by the State; it could be run through a contractor or a private firm. There are options on how to do that. One could have a mixture of State lanes and something that we sometimes call Jiffy Lube -- that is just because you know what a Jiffy Lube looks like -- but having some centers like that.

SENATOR RICE: Through the Chair, may I ask you to send us a copy of this proposal for this high-tech system--

MR. SIMON: The latest definition-- We can do that, yes.

SENATOR RICE: --because I am not for privatization. It seems to me that EPA has just become a partner of contractors. Maybe that is where you ought to get your funding from, you know. But send me a copy, if I may through the Chair.

SENATOR McNAMARA: Thank you, Senator Rice.

ASSEMBLYWOMAN OGDEN: Any other members of the Committee have questions?

ASSEMBLYMAN KRONICK: Thank you, Madam Chair. Thank you very much, Mr. Simon, for your incisive insight here.

What concerns me is mainly the out-of-state emissions. Pennsylvania, for example, could be a very serious culprit, I believe, for Warren County and New Jersey. How will you monitor industry? Is this by mobile units measuring the air quality near these plants? Which industries do you know at this point in Pennsylvania are the ones causing the greatest problems, say, with ozone?

MR. SIMON: I can't give you industries for ozone -- specific industries for that. In fact, ozone is caused by such -- by the contribution or disbursement of emissions of volatile organic compounds. But almost anything that deals with solvents, that deals with manufacturing processes, will generally have some organic emissions from them, whether it is

there or in New Jersey -- dry cleaning establishments, those kinds of things. But it is a pervasive mixture type problem. It is not so much the large single power plant type or big and single industrial plant.

How do we plan to monitor? There are several ways we will monitor, or we will keep a check on emissions. One is, just by the design of the equipment itself, those will have certain limiting -- certain abilities to limit the amount of emissions that come out. When facilities are big enough, and plants are big enough, some will actually have devices that test on an ongoing basis what emissions are coming out. Generally, to test how well we are doing in terms of air quality, we have, over the years, had an agreement that states would generally do the testing -- the testing of the ambient air, and EPA would try to duplicate that because we have to share the money and use it in the best way. From time to time, we do use mobile monitors when we are trying to define a very isolated problem. That is not very helpful with ozone. We would expect that mobile monitors, for instance, would be used with carbon monoxide from tail pipes of automobiles, finding a very polluted automobile on the highway. Here and there you would have a mobile system that would do it from the side of the road, for instance. So there are some cases where mobile systems would come into play.

ASSEMBLYMAN KRONICK: Would you actually be involved in a plant by sending an inspector and seeing how they construct it and what steps they are taking to monitor it?

MR. SIMON: That also is something that we share.

ASSEMBLYMAN KRONICK: With the State?

MR. SIMON: The vast majority of inspections of plants, but also review of the plant permit and the permitting program, is done by the State. We take a fraction -- a small fraction -- of that, generally less than 10 percent, and we do that level of work, first to maintain some consistency, and

secondly, to determine how effectively the state is doing the job. So what we did was share matter again, rather than duplicate. We both don't have enough resources to do the job the best it could be done.

ASSEMBLYMAN KRONICK: I see the out-of-state emissions as a difficult problem to monitor, because when you are close to a border-- Do you see this the same way, that it would be very difficult?

MR. SIMON: That's right.

ASSEMBLYMAN KRONICK: Then I can see in your allocation of funds to a state-- Well, where is it coming from, and who gets how much to address that problem?

MR. SIMON: In that interstate movement of pollution, first the Ozone Transport Commission has the ability to come to EPA beyond the state's ability to make overtures about doing something about a state. It really offers a very effective thing. You know, we in the Federal government often think of states being disparate and separate entities, and it has been very impressive that 11 states and the District of Columbia sat down with states taking some of the view, like, "Gee, here's New Jersey, here's Pennsylvania, and you're polluting us," or vice versa, and yet they sat down. They have knocked out a number of agreements already. They have been very positive and cooperative. It is really very impressive. I am very hopeful. I hope the same spirit continues. They have been very successful in moving forward so far. It will become more difficult later, but again, that Commission will help.

If Pennsylvania, on that Commission, and Delaware and Virginia and Maryland are passing the same regulations you are passing in New Jersey, and doing things in a strategic matter to help New Jersey, then you do have the kind of protection you are looking for, and they will be doing the kind of things you want them to do to make the air here better.

ASSEMBLYWOMAN OGDEN: Thank you. Assemblyman Solomon?

effective in getting the new Transportation Act -- the Surface Transportation Act -- skewed in a way to give benefits to New York and New Jersey. I am sure we could find more. Whenever I pick up a newspaper, almost every week, I hear very much the Commissioner of Transportation in this State talking about how his transportation policies and programs are going to move primarily towards enhancing environmental protection, by doing whatever it can to promote and support mass transit type activities.

So, that is the way the system is supposed to work in a nexus type situation. We have ongoing negotiations with the Department of Transportation -- the Federal one -- to ensure that we get that skewed to its mass transit. Yes, we are biased in favor of mass transit over highways, and we do everything we can to cause that to happen, and we will continue to do that.

SENATOR McNAMARA: Thank you very much, Mr. Simon.

MR. SIMON: Thank you very, very much.

SENATOR McNAMARA: Are there any other questions?

ASSEMBLYMAN KRONICK: Yes, one more, please. You represent Region II. Is that correct, Mr. Simon?

MR. SIMON: That's right, but I am here representing EPA. I work in Region II, but I am representing EPA.

ASSEMBLYMAN KRONICK: Okay. How many regions are there in the country?

MR. SIMON: There are 10 regions.

ASSEMBLYMAN KRONICK: How will the 10 regions compete for the funding? I mean, is there an established criteria, you know, based on the seriousness of the problem?

MR. SIMON: That's right, yes.

ASSEMBLYMAN KRONICK: And this is objective criteria?

MR. SIMON: That is correct, yes. Well, sometimes we, ourselves, argue that we should skew it a little more to get

more money into Region II. In that case, we do argue for our region -- our states.

ASSEMBLYMAN KRONICK: Do you know what percentage Region II will get out of the whole pie?

MR. SIMON: By the way, I did mention that these were funds to support the program development and the implementation activities. These were not some of the things like the Transportation Fund. Those are bigger dollars in a different place. So the \$3 million was not really-- It could be bigger, but there are no credits.

ASSEMBLYWOMAN HECK: No, I know that; I know that.

MR. SIMON: Right now, New Jersey gets-- In our region, we get about 9 percent of the national dollars here. Population, industrial development, all has a lot to do with it. Of that 9 percent, New Jersey gets about 40 percent of what we get in the region. Those are rough numbers, you know. If that is off by 1 percent, that's not what we're talking about. It's not off by 10 percent.

ASSEMBLYMAN KRONICK: Thank you.

SENATOR McNAMARA: Thank you, Mr. Simon. Thank you, Mr. Baker.

MR. SIMON: Thank you very much.

SENATOR McNAMARA: The Commissioner of DEPE, Commissioner Weiner. And do you want Christine Johnson, from DOT?

COMMISSIONER WEINER: Yes, if I may ask Assistant Commissioner Johnson and Commissioner McConnell--

SENATOR McNAMARA: And Commissioner McConnell. I don't know if this is a format of good news/bad news, which category you fit into.

COMMISSIONER WEINER: Well, I will try to put some people's minds at ease while we just set up some visual aids.

In terms of expansion of staff and where our staff is -- I know this will get Assemblywoman Heck's attention -- let

me just say that, in the past year or so, as we geared up from the planning stages for the Clean Air Act and realigned the Department, there have been about 40 new positions related to air, clean air particularly; 40 positions at the Department. Of those, I would say that at least half were filled by the reassignment of existing personnel. So, that came out of both our internal reorganization and trying to get our existing resources and putting them where they belonged. Most of the other people who were hired were entry level, what we call "trainee" positions.

In terms of future impacts, we are still evaluating it. I can tell you that our experience won't be Virginia's experience. There may be some incremental growth. I am not ready to talk about that yet. When I am, you can be sure I will be here. But again, we think a lot of those positions will be able to be filled by internal reorganization.

A couple of other quick points: The issue of the delayed filing of the May 15 air regulations that Mr. Simon referred to-- It is, of course, correct that the rules were to have been adopted by May 15 of last year. They weren't. Whatever solace it is, we were not alone in that condition. We had, however, proposed the rules by May 15. As was pointed out, we proceeded to adopt them, and as far as we know, we are now ahead of a lot of our sister states.

One last point before I go into my formal presentation: Assemblyman Kronick, you were asking about the relationship of our region to other regions, how we fare. Let me say two things: Mr. Simon, and Mr. Sidamon-Eristoff, the Region Administrator, do a marvelous job of representing us within that bureaucracy. But I also have the honor of serving us in what they call the "State EPA Operations Committee." That is made up of a representative from each region, my counterparts; 15 commissioners, 10 of us in the region, and five at large. I am also there, literally at the table,

discussing these issues. On these issues in particular, air issues, I am a member of a very small task force that meets regularly with the Administrator and Assistant Administrator in Washington on implementation. In fact, we are meeting on Monday to go over some of the issues we will be talking about.

One last point-- Where did the map go? (addressed to associate in audience) There it is, the new map, the EPA map. I want to keep that out because--

COMMISSIONER BARBARA W. MCCONNELL: I hope that is not his testimony. (laughter) I'm leaving.

COMMISSIONER WEINER: What's that?

COMMISSIONER McCONNELL: Oh, I'm sorry. That's not your testimony, is it?

COMMISSIONER WEINER: No, no. (laughter) I'm going to summarize it.

I just want to leave one thing in people's minds: We talk about the regional impact. I may talk a little bit about that. Move this over there so I can get-- (referring to placement of visual aids)

I want you to visualize the region, because there has been a lot of debate about what is going on in Virginia; what is going on in Maryland; what is going on in Pennsylvania. "They're smarter than we are, because they're not doing anything." As they do nothing, they make the problem worse for us. As they do nothing, their lack of control-- If they do nothing, their lack of control of this problem literally floats it right up into Philadelphia; floats it right up into New York City, and then it becomes problems that we have to deal with.

I will tell you, like Mr. Simon said, that my experience in the past year on the Ozone Transport Commission is a case where all the Governors -- the 11 Governors, working through their commissioners and their air directors -- have gotten together and I will tell you, in my 20-year experience in and out of government, I have never had an occasion where

there has been such effective regional cooperation. The people in Maryland know that what they do is going to affect us. We try to respect the fact that what we do is going to affect Connecticut and Massachusetts, and Maine, or any of the northern New England states, whose air pollution problem is entirely not their own. It is ours. The ozone problem transports up.

We are going to get to discuss this later, but if we talk about whether or not we need a LEV program in the region-- They don't need a LEV program. The marginal impact of a LEV program for them is minimal. It is very important down here. The reason they are signing onto it, why the Governors -- every Governor -- supported it, is because if they don't, the market breaks up. Then everybody is concerned about volcanization of the marketplace and unfair competitive advantages and disadvantages among the states comes to fruition.

So as we talk today, and in the next couple of weeks, remember this matter, and think about what is not happening in the other states and what that means to all of us here.

This is not my testimony. This is a bibliography of materials that we made available for the Committee. We have two copies today for the two Chairs and I have a copy for OLS staff. We have more copies available. What this is, essentially, is 23 documents that the Department has used in developing our strategy. When I say, "our strategy," I mean the administration's strategy.

SENATOR McNAMARA: How long did you take to develop that?

COMMISSIONER WEINER: The strategy, or this?

SENATOR McNAMARA: That strategy which is reflected in that one-foot pile of documents.

COMMISSIONER WEINER: This has been ongoing, Senator, for at least two Governors. Some of the strategies we are

talking about today, and some of these documents, go back to the former administration.

SENATOR McNAMARA: I appreciate the deliverance of it today, but I can assure you it is going to be very difficult for both Maureen and myself to get any kind of a great feel for it before next Thursday's hearing.

COMMISSIONER WEINER: I don't expect you to, nor do I expect staff to, but I'll tell you a couple of things that are in here: You have heard a lot of debate about, "Is it \$1000 a car, or is it \$170 a car?" The two reports are in here. Let your staffs read them. Go to the pages. This isn't something we expect everybody to read, but it is all here. The things that support the positions, the things that oppose the positions are all here, and I will submit to you that nobody has ever done that before. It's all here for you.

SENATOR RICE: Well, rather than give them to the Chairpeople, they can't read them, why don't you give me a set? I can read them. (laughter)

COMMISSIONER WEINER: You've got it.

SENATOR BASSANO: We want a report before 12:00, Ron.

SENATOR RICE: I'm not giving no reports now, but I'll know what's in there. I'll guarantee you that.

COMMISSIONER WEINER: Over the period of time-- This certainly predates us. As I said, there has been a very effective interagency coordination going on to deal with these issues. In Mr. Simon's testimony, we float quickly back between environmental regulations, transportation regulations, business impacts. There are labor impacts. We have had -- I will say during this administration -- an ongoing interdepartmental task force, at both the Cabinet level and the sub-Cabinet level, that has involved our three agencies and other agencies. The Department of Health has been involved; the Department of Labor has been involved. So we can

understand the full breadth of these problems, which is why we are all here today.

The assignment that we want to take on today, and my assignment specifically, is to talk about the Clean Air Act, our planning for it in general in terms of air quality and mobile sources, and to talk a little bit about how did this administration ever come up with the idea of this LEV? Where did it come from? What are its roots, and why do we think it should be talked about and debated? Then, for next week and the weeks that follow, the debate can ensue as to whether it is a good idea or a bad idea. My goal is just to let you know how we got there.

You have gotten some handouts today from the Department, in addition to Senator Rice's reading materials. I will be referring to some of those materials. Again, this is to give an outline of discussions.

This page is the outline of the Clean Air Act. Mr. Simon mentioned it. Again, it is important to remember that the Clean Air Act is much more than what we are talking about today. We, of course, will be available, at the Committee's convenience, to talk about other aspects of the Act.

For those people who want to follow along with me, I ask you to turn to "Complying With Title 1 of the Clean Air Act." It is a few pages behind the maps in the departmental handout. I just want to point out a few things. I want to go quickly because of time constraints.

The problem we are going to be talking about today is ozone, again, NO_x and VOCs -- these phrases will roll off your tongues after a while -- and carbon monoxide. Ozone is VOC and NO_x . Now, there is an interesting part of the debate about VOC and NO_x as we go through this; that is, what is the total inventory? How much is really out there? If you remember, at one point people scoffed at a comment that trees cause a lot of the ozone. Well, in fact, trees do cause a lot of the ozone.

Part of VOCs is a naturally occurring event. It occurs from trees; it occurs from farming; it occurs from vegetation; it occurs from animals. You may remember reading a story not too long ago where somebody had suggested putting bibs on cows to prevent them from putting VOCs out into the air. It is a source of VOCs, but it is not controllable, unless we want to kill the cows and cut down the trees.

Nobody is suggesting that. So you'll see under "Ozone," a breakout as to what the real controllable inventory is, the things we can control. Basically, they are divided up, and you will see the percentages here of the controllable inventory: highway sources, cars, buses, and trucks that go on the highways; area sources, wastewater treatment plants. For example, off-highway, which could be tractors off a highway, recreational vehicles, barbecues, things like that, and stationary sources, the big stacks, principal utility stacks.

SENATOR RICE: You don't show barbecues.

COMMISSIONER WEINER: Well, we'll get to that, Senator; we'll get to that.

Carbon monoxide is a winter problem, where ozone is a summer problem.

"Where We Are Now": The 1990 inventory-- Right now, our controllable VOC admission levels, today, we estimate at 1563. Mr. Simon noted that we are in the midst of doing our new update, the 1990 inventory. We expect to have the draft of that ready by May or June. This number, 1563, is our best educated estimate of what that will look like. We have already tried to take into account the impacts over the past couple of years -- 1563. Carbon monoxide, you will see, is a little over 4000 tons per day.

What we are mandated to do under the Act-- I just want to draw your attention to one line there, the top line: Reduce VOC emission levels by at least 565 tons per day by 2005 -- a 42 percent reduction. We get to that -- if I go back to

Mr. Simon's testimony -- 15 percent by 1996, 3 percent every year thereafter to the year 2005. So, if you take the total inventory and you reduce it by the mandated requirements, we have to find, over the course of these years, 565 tons per day. That is the target. I will tell you, this is the best case. It doesn't get better than this. The reason I say that is, you heard Mr. Simon talking about 50 percent, 60 percent, 70 percent reductions. We're taking the 42 percent out of the Clean Air Act and putting it over our existing inventory.

When you go back to think about what is going on in other states-- In fact, our existing inventory is exacerbated by what happens in other states -- Mr. Kronick's point. It transports. And there are complex air quality computer models, these called ROMNET 1, ROMNET 2, and Mobile 4.1 -- all of these computers at EPA. They will eventually tell us what our real number is. I guarantee it is higher than 42 percent. So the scenario we are going to take you through today is the best case scenario. By June/July, we will all be a lot smarter as to what it is.

Now, if we talk about the size of the inventory, I am going to make a prediction because I saw this. This happened on Monday. I left the room, but some of my staff were there. There is going to be an interesting debate. We are going to hear a lot of things over the next few months. One of my favorites is the statistical sly of hand that takes place. It says, you have this big problem with VOCs, and auto emissions are only a tiny, little part of it. So why are you spending all of your time on auto emissions? Why don't you look at barbecues and tractors? Why don't you look at some of these other things? Why don't you look at utility plants, more than you're looking at them? This is just a tiny, little sliver.

When we meet next Thursday, we will give you this breakout more visually than I am going to describe to you, but just remember that the total inventory includes animals and

trees. When you begin to take that away, the inventory gets smaller, and the impact of autos, and auto emissions in particular, gets larger. As the impact of auto emissions gets larger, one can say 80 percent of the entire pollution problem is caused by 20 percent of the vehicles. Then you begin-- That is a sly of hand. It is like a shell game; don't look at this number, look at that number. And they will show you -- if they do the same thing they did Monday at an Alliance for Action meeting-- A big round chart with very thin circles that says, "Go look at everything else," and we are going to talk about what those other things are in a minute.

There is a chart here, "Steps Already Taken." This is what Mr. Simon was referring to in New Jersey, because you and your colleagues, over the years, because of prior administrations, because of the work of this administration, have been attacking air problems. We have done vapor recovery. We have done marine vapor recovery. We have done RACT in some areas. We have gotten 58 tons out of the air from all of this. These are things that are happening now. They are in the system; they are done. That is the good news, why our air is a little better than it otherwise would be.

The bad news is that we don't get any credit for this against the 565. But we figured out what the existing inventory is that we have to work off against. The 42 percent-- We have already counted this. So when you think about what our other options are and somebody says, "Well, why don't you consider vapor recovery?" We have. "Why don't you consider RACT?" We have. "Why don't you consider marine vapor recovery?" We have. It is already factored into the equation.

You'll see that the zeros are here for NO_x . It is because these are predominantly, exclusively VOC strategies. All these numbers that you will see today, I will admit are not pinpoint accurate, but they are all correct in terms of their relativity to each other. This is 30. It could be 27; it

could be 32. If you put two computers together you get slightly different numbers, but they are all relatively correct, and you will get a sense of scale.

So today, notwithstanding all this, we still need our 565 tons that I talked about. What are we going to do about it? Here are the federally mandated steps that Mr. Simon talked about. Yes, we need 565 tons by 2005. We are going to redo it by 382 tons, still leaving a shortfall of 183 tons.

Let me quickly run through this. The way the numbers work -- this is going through great detail -- is, we believe-- The early word from the EPA is, we will get some credit against VOCs from our NO_x. We are doing very well on NO_x. That is about a two-third to one ratio. We have taken those credits. We have been aggressive wherever we could. We can bring it down 382 tons a day -- down.

Now, cleaner cars and cleaner fuel. The use of cleaner cars: This is not the California LEV. This is what is in the Act. The Act, as many of you know, says, to all states, "You have a choice. Either you take the Federal tail pipe emission standards, or you can opt for the California tail pipe emission standards, if you think you need more." This is what the Act requires. And again, the cost per ton-- This is what our best estimate, consulting with others, has been as to what it would cost per ton to obtain these results. This is in the Act right now, so we are going to do it; we have to do it; everybody has to do it.

Use a cleaner, Federal reformulated gasoline. That is the reformulated gasoline Mr. Simon was talking about. That is the gasoline that is coming here LEV or no LEV. This is a gasoline that is very important when you look at the numbers: 48 tons of VOC come out in the first phase; 10 more in the second phase. That is a very important component. We are all counting on it, and this is what we are basing the fuel on. I am going to talk about fuel a lot, but so you hear it in a

clear, declarative statement: We are not requiring California reformulated gasoline -- period. This is the gasoline that we-- The "we" is not just New Jersey; it is all states are relying upon it.

Additional RACT measures: These are things, again, as Mr. Simon talked about. I just want to point them out: Reduce emissions from utility stacks. Again, to Mr. Kronick's point, and I know some concerns of yours. You will see that this is very big in terms of getting NO_x out of the air. It is a very important strategy. It also, on its own, gets a lot of VOCs out of the air.

We, in New Jersey, have been able to play a very instrumental role in developing the NO_x RACT strategy because of our physical location; our membership on the PJM Bridge. The New England states had an idea; we participated with them. The Atlantic states had an idea. The two extremes were: Do nothing. Let's wait awhile. Or the other extreme was: Let's go to the extreme end of control. So it's SCR technology now.

We were very fortunate to be able to help to put together a compromise that was adopted by the OTC -- Ozone Transport Commission -- a few weeks ago as a phase-in approach. If my friends from PSE&G are still here, they will tell you that their participation, and the other New Jersey utilities' participation, helped us to get that type of regional compromise together that provided measurable attainments in the first phase, and still leaves an open analysis for later on.

Clean Fuel Fleets: A little known requirement. Some of you who are in the automobile business or the oil business may know about it. There has been a lot of talk about this. It requires places of business with 10 or more cars in a central fleet to use clean fuels and meet stricter emission requirements. A couple of things I want to point out: It is a mandate. In terms of the relative weight of its value, it is

not very big. In some ways it is easy to comply, because by definition Federal reformulated gasoline is a clean fuel under the Act. So everybody who has 10 vehicles, it appears, can comply merely by fueling up at their gas pump.

There is another provision in the Act. The other provision says: "You also have to meet ever-increasing, ever-stricter emission standards. Do you know what those emission standards are? California LEV standards. If we do nothing, the LEV standards, as standards, will be here.

Now, does that mean that anybody who sells a car can meet it? It is different than what we are proposing, what the State is proposing. It means that if I am a fleet operator, my fleet has to meet that standard beginning in 1998, and I have lots of choices how to do it. I can go out and buy Federal reformulated gasoline, or I can convert all my cars to electric. Or I can retrofit some to compressed natural gas or propane. I can do lots of things. Nobody has to sell me a car that will meet that standard. But as an owner of the vehicle, or really as an owner of the fleet, I have to meet that standard.

So the standards we are talking about are not some high-tech something that only works in California; that only has relevance in California. Through this program, it has relevance. It is different. You are not mandating a vehicle that can meet it, but those standards are going to be something that can be attainable under the Act, as it is now.

So again, the point I want to leave you with -- and we will have lots of time to talk about this over the coming months -- is, these are the things that are mandated. When all is done, we will get 382 tons out of the air on a ever-sloping of benefit curve. We are still 183 tons short. What do we do about that? How do I find that 183 tons? More to the point, how do we find that 183 tons?

Six principles have guided this administration as we tried to address how to find those tonnages. One, we recognize that it is choices, and we are going to take you through some of those choices. Two, we have tried to do this as a very open process. In the period October 1991 to December 1991, the Department ran 10 public hearings, or 10 workshops, on these issues and other issues relating to the Clean Air Act. In the aggregate, there were well over 1000 people who attended all of those workshops. We held 25 working groups after those workshops -- as a direct consequence of those; again, attended by scores and scores of people. Unfortunately, someone wrote a letter to the editor recently -- which you may have read -- criticizing one of the Department's initiatives, saying, "We understand why they are rushing a judgment on this, because they are not involving the public."

We can do more, and we will do more. The thing that annoyed me was that that gentleman was in the audience at the hearings. You've got to look through some of the debate and some of the things that are being said. As an administration, we have been open -- very committed to an open process.

Some points that were made earlier about cost-efficiency: We are very concerned as we look at these issues, and go through the issues with you. We recognize marketplace concerns, and we want to rely upon marketplace concerns. This means cost-efficiency of the options. It means impact to New Jersey residents, New Jersey businesses, New Jersey consumers. It means flexibility in the marketplace. These are all the values that we look for to see whether that strategy is comparatively better or more onerous than another strategy.

Equitable burden sharing: It would be easy, as you will see, to throw this burden on one segment of the community. It would be very easy. The problem is, it would be unduly expensive, and the cost to New Jersey's businesses and

consumers would also become extraordinary, and I think intolerable.

Another goal we have is, these things have to promote economic growth. An option that does not promote economic growth, in fact, would retard economic growth, is by definition unacceptable. We think that if we are all willing to be creative, not only do we get clean air, not only do we get a better community environment out of this, but if we begin to become creative and say, "How do we build economic incentives to get the businesses here?"-- Somebody is going to be building these things. Somebody is going to be doing RED on these things, "these things" meaning control strategies. How do we get them here into this State, located here?

Finally, regional cooperation. You simply can't do anything successful in attacking this problem without you doing it regionally. It has to do with competitive advantages and disadvantages, and it has to do with the fact that it is very hard for me to talk to my colleagues, as it would be hard for you to talk to your colleagues in another state legislature, to say, "Come on, clean up your act. You've got to get that control technology in," unless we are willing to carry our burden also. That is why the OTC is so important.

I just want to make two points about the Ozone Transport Commission:

One, it is made up of representatives of the Governors. That is not to say that there is not a legislative role in it. We are here today. But the OTC is not made up of 12 bureaucrats who sit around and fantasize about what could work. It represents the collective philosophy and the collective policy of the 12 Chief Executives of the region, as carried out by myself and my counterparts and our staffs. In every state throughout the region, meetings like this are taking place. In some states like Massachusetts, some states like New York, and some states like Maryland, you now have a

complete consensus on some of the mobile straw strategies, particularly LEV. In some states, like New Jersey, they are debating it. No state, contrary to anything you have heard, has outright said, "We are not going to do it." No state has said that.

Let's take a look at the options, if you take those principles, and what the options are we are looking at. There it is, the LEV program. Some people like to call it the "California car program"; I like to call it the LEV program. During the week we really named it the "NELEV" program -- the Northeast LEV program.

The job of the Act: We are estimating 25 tons, cost per ton \$1700. The number "40" is in parenthesis because we have worked up our own models. We have seen other models that could assign 40 tons of VOC. We are going to be conservative. We are going to point out that we think we can make it 40, but under our scenario we get 25, and we are adding in the lower estimate of that.

Let me just answer a question that a lot of you have been asking me individually and at other Committee hearings: Why did you do it now? Why did you propose this now? Why not wait? Let's wait and see what else in the region is going on. Three quick points:

One, we wanted to make the proposal concrete. LEV is not just three letters. It is a proposal. You have copies of it. It is in the "Register" now. It has been circulated out on the street, and people can see, once and for all, what the program is like; how it is similar to other states', and how it may be different. And you get to debate over a specific proposal.

We are going to hold our own hearings, as you know, hearings in May and June, and Lord only knows how long those hearings will go. Like you, we may add hearings. This is the start of a process. So, we wanted to make the discussion

concrete. And frankly, we also wanted to kill some bogeymen, because a bogeyman keeps running around saying, "They are going to require California fuel. They are going to require California fuel." I will say it again: We are not requiring California fuel. Read the proposal. We are not requiring California fuel.

In fact, in Maryland, where LEV was working its way successfully through the Assembly-- Some of your colleagues, led by Senator Baker in Maryland, passed a committee vote, about two weeks ago, six to five, that would have killed LEV. On Friday of last week, just four working days ago, Senator Baker announced his support for the LEV program because he finally came to realize that as long as it doesn't mandate California fuels, he is in support of the program. He announced that it will be passed in the 1993 legislative session in Maryland. As I am sure many of you know, Maryland's legislature has either just or is about to recess until 1993. So, Maryland will be on board. Governor Schaefer, the whole legislative leadership, and the two legislative committees have endorsed LEV, so we wanted to honestly kill the bogeymen.

Secondly, we wanted to maximize lead time for debate and discussion. If you are going to have a LEV program, the law requires -- and everybody can understand why -- that it be adopted at least two model years before it becomes effective. We are proposing 1996, the same as Massachusetts. By the way, New York just adopted 1995. We are proposing 1996, which means that it really has to be in place latest the fall of 1994. We all know for our purposes in government, that is around the corner. And to avoid a case where any of us have to say we have to rush to a judgment, we wanted to get it out now in concrete form. I don't expect to be adopting a rule this summer. I expect to be talking about it. You may decide, in your legislative prerogative, as you point out, Senator, that

we shouldn't be doing it, in which case we need to come up with other options. We wanted to maximize our discussion time.

Finally, we wanted to coordinate with the region, because, as I pointed out, the debate is going on elsewhere throughout the region, and we felt it was important that this debate take place uniformly throughout the region. So, in one form or another, all the states are proposing it. We put ours out by a rule.

Further industrial controls: Again, these are some options that are available. Here is Stage 2 of RACT that I talked about before. Again, another control is a wastewater treatment operation. I just want to point out reformulation of consumer products, such as: deodorants, paints, nail polish. This is something that is going to require either Federal action, which we anticipate, or regional action. California does this now. I am not saying that because California does it we should do it. It is just to answer the question: Can a state really affect the consumer marketplace? If we do, we are going to be doing it regionally, and we think the marketplace will fill in.

Secondly, these do not come up, again like LEV, until much later into the decade, in terms of their impact. But these are some of the options that will get us in that sloping curve of reductions between now and the year 2005.

Vehicle Scrappage Program: Again, you will see 12 to 1. Some people say, "Before you do LEV, why don't you think about a vehicle scrappage program?" We have. Here it is. Depending upon how you design it, you can get anywhere from really zero credits maybe up to 12; maybe one or two more. We think 12 is fairly aggressive, so we gave it a lot. Why zero? If you think about the President's vehicle scrappage announcement, he said, "Scott Weiner's company," even by Senator McNamara's car that is polluting a ton -- "and then I can avoid doing something to my company that has to do for a

ton. The net impact is zero. It is good marketplace dynamics; it is good flexibility, but the marginal benefit is zero.

So, because of that, what is being talked about now -- and I expect I will be talking about on Monday -- is a provision that would allow a state to take something off the top; maybe not a 1 for 1 ratio, like emission offset, maybe .9 to 1. So, there is always some marginal beneficial increase. You could have a program where the State buys cars. I discussed this with your colleagues in the Assembly Appropriations Committee yesterday: Should the State have a program where we buy cars, give money by taking that old junker off the road, and then target that money for the purchase of a new car? Give a financial shot in the arm. Those are the types of incentives we need to be thinking about.

We will have a scrappage program. We are thinking about it, and working with EPA and the other states in the region. So again, as much as we can, we will be working together as a unified marketplace and as a vulcanized marketplace.

Energy conservation measures-- Assemblywoman Ogden, I said to Rick Sinding during your comments, "We probably should have put a line in here about the State Plan." But first let me talk about energy conservation measures: If we implement all the recommendations in the Energy Master Plan, which we will be doing -- it is certainly our position to do-- The reason we probably couldn't put the State Master Plan here with an asterisk, is because a lot of what the State Master Plan is talking about are planning and transportation strategies. In fact, they are built into our transportation measures. I am sure Christine will be talking about that. So this, right now, is sort of the spring of '92's theory. None of this is cast in stone; none of this is set. But when somebody says to me, "Okay, how does New Jersey think it is going to get from here to there?" these are the things we are considering. Even if we

do all this, we are still two tons a day short. I will find those two tons when the time comes.

But now, what happens if you take LEV off the table, and you say, "Commissioner, what other things can we be thinking about, or have you thought about, and why did you choose those?" Those are the other options to close the gap.

Use 25 as the number. At your leisure, you can look through this, but use 25 tons as the number. Pick a high-tech car emission and maintenance. I/M could take all of the session. We'll just say, "This is the high end of the high-tech I/M," that was talked about this morning. I am sure you have heard from our DMV in terms of their concerns -- six tons, \$5000.

Low Emission Vehicles/Trucks: Why are you concentrating on cars and not vehicles and trucks -- heavy-duty trucks? There are programs on diesel particulate and others. One reason is because the California program, which the law would force us to-- We can't create a New Jersey program. Either it is the Federal program or it's the California standards, which haven't been developed yet.

Secondly, when you think about burden sharing, and you think about who should be carrying that and where the emissions are coming from-- We can get some emissions reductions here, at slightly larger costs per ton. We may need this anyway, but to phase in sooner, let's take a look at retiring our fleet of personal automobiles in their normal evolutionary stage.

California Reformulated Gasoline: Here is the bogeyman. It's right there -- 16 tons. If you take LEV off the table, this jumps up now as an option. I am not saying that to bait anybody. It just is there. We agree with the petroleum industry that California reformulated gasoline makes no sense in this region. It makes no sense principally for market reasons, and it makes no sense because the oil industry and the petroleum industry have, and will invest a ton of money

to get Federal reformulated gasoline here. To require this now would effectively (indiscernible) a lot of that investment, which is why no state in the region is proposing California reformulated gasoline.

The Off Highway Program: In here, Senator, are some -- you will find them in here, and sometimes you will find them in area sources -- barbecues. Take a look at the numbers. We are not proposing this. Lawn and garden equipment: I was at a conference recently where somebody said, "The problem is lawn mowers. The problem is lawn mowers. It is all those damned lawn mowers, and the gasoline they burn." There are a lot of lawn mowers and they burn a lot of gasoline -- two to three tons -- and you have to put a catalytic converter on lawn mowers. You can do things in here, but our choice was, looking at the aggregate estimated cost per ton, which is running about five times higher than LEV, that if you ask people to change their life-styles, if you ask them to drive a car that is a little cleaner and has maybe some limit to the amount of increase in cost-- Or do you need to say, "We are going to start controlling your lawn and garden equipment"? Or, if you follow my point down to life-style changes, do we say, "We are going to prohibit barbecues. We are going to prohibit students from driving to school"?

This isn't stuff that DEPE makes up in the dark of night to scare people. These are real strategies that are being talked about in areas where they can't find the other tonnages. So, we thought about all of these things, and at your leisure you can take a look at them. We concluded, based upon the costs of anywhere from \$2000 to \$50,000 a ton incrementally-- Again, if we are off a few thousand dollars a ton, I don't pretend we are perfect. The scale is what is important. When you look to see where you find that missing 25 tons, if we are right on the lowest, it gets tough. There is no 50 percent control on asphalt roofers. Think about what

that would mean in terms of its impact throughout the economy. It is not just asphalt roofing.

Employers of 50 or more to go into employee trip reduction programs. We all appreciate the difficulty, the challenge they face to get it at 100. These are the choices; these are the things we can be discussing over the next number of months, and there are other choices.

So, what conclusion do I want to leave you with? We take this, all of us, along with you, as a very serious set of decisions that we have to make. But these are not decisions that we have just jumped at like that. These are not things that we have rushed into. I think the answer is compelling. As you work through the numbers and you work through the strategies, and you use the bibliography, I think you are going to find that the decisions are compelling also.

The proposal for LEV that is on the table right now was done in conjunction with other states. It is meant to reflect a great deal of thinking that has gone on both here and throughout the entire region.

That is the point for today on this. I'm sorry I talked so fast. I want to give my colleagues an opportunity to say something. I thank you for the chance to come here to make this presentation.

A S S T. C O M M. C H R I S T I N E J O H N S O N: Good morning, Senators and Assemblymen. I am Christine Johnson. I am Assistant Commissioner for Policy and Planning, and most of the clean air planning falls within my purview.

I first want to convey the regrets of my Commissioner, Tom Downs, for not being able to be here. He wanted to very much. I am sure you are aware, those of you who have gone through some of the hearings with us on our capital program, that he cares very much about this issue, and has worked very closely with Commissioner Weiner in trying to develop a coordinated policy. I certainly want to echo the

Commissioner's comment that not only at a Cabinet level has there been close cooperation between our strategies, but at a sub-Cabinet level we have been working very closely, and successfully, with our sister agencies in developing an approach to meet the Clean Air standards.

I want to cover four themes with you that I would hope you might retain from the Department of Transportation's presentation today. The first is, as you have seen, we are required to implement transportation control measures. Actually, if I could request your staff to go back to the first board you put on of the required measures, I am just going to use your props. However, what I want you to understand is that we believe that it is good transportation policy to pursue those measures whether or not there was a clean air strategy or a clean air mandate, and I will talk about that in a minute.

The second thing I want to be very clearly understood, is that we are required to do an employer trip reduction strategy.

Third is that not only did the Clean Air Act require us to do these two sort of special strategies, but they have actually gotten into the entire business of the Department of Transportation, and will require our entire capital program to meet a test of clean air, and I will explain that a little bit.

And finally, DOT particularly faces the dual sanction -- the dual penalty of sanctions, as well as lawsuits.

First, I would draw you back almost two years ago when the Governor created the Transportation Executive Council among the various authorities and other transportation investment bodies. We met for many, many weeks and developed a five-year strategy. A key conclusion of those meetings was that for many, many reasons, including wetlands, including community concerns, including sheer lack of land, we could no longer pursue in New Jersey a strategy of building our way out of congestion. We had to begin relying increasingly on strategies

that moved more people, rather than vehicles, on the infrastructure that we already had.

To do that, we said, and we committed to pursuing many of the transportation control measures that we were actually subsequently required to do in the Clean Air Act. We came out with these recommendations in about September. In November, I believe it was, the Clean Air Act amendments were passed that made our stated policy essentially required.

I want to expand a little bit on EPA's statement about vehicle miles traveled. In essence, the Clean Air Act says that we cannot increase the emissions from VMT. So, we have kind of two choices here: Either we can stop all economic growth in the State; we, you know, eliminate mobility pretty much, or we somehow clean up our cars so that we can continue to grow in the amount of travel, but that travel is increasingly cleaner.

The strategies that we are jointly pursuing essentially rely heavily on the technology of cleaning up our tail pipes first. But the point that Commissioner Weiner made very clearly was that even if we go through all of those mandated requirements and even some of the things that he had on his second chart, we will not meet the requirement. Therefore, toward the end of the decade we will be reliant on the transportation control measures.

Now, let me give you some examples of those so they won't seem like mysteries. I have, by the way, in my testimony, provided three pages -- count them -- of examples that we can pursue. We are not pursuing all of them. But they are shifting people to the use of mass transit; putting greater reliance on carpools and vanpools; improving our intersections so that cars move faster and don't idle; making use of Park n' Ride lots; making use of HOV lanes. The list is relatively extensive, but it relies on two basic principles: Either we are speeding up the flow of traffic so we don't have idling

vehicles, or we are changing the mode of transportation that people use to a less polluting mode.

To put it in very concrete terms, in order to allow ourselves to grow at about 1 percent a year in vehicle miles traveled, that would be about 30 million vehicle miles traveled that we would grow over the course of this horizon to 2005 or 2007. The kind of control that the Department of Transportation, in essence, has to exert in order to fit into the strategy that Commissioner Weiner has talked about, is to essentially eliminate about 100,000 trips a day by the year 2000 that we've got to have made in some other mode of transportation. That is probably bringing it down to the most concrete terms that I can. We believe that right now, as a matter of good policy -- good transportation practice -- we are pursuing strategies that would, in essence, accomplish that.

Second, the Clean Air Act requires -- no choice -- that we have a legally enforceable mechanism by November of this year to have employers of more than 100 employees implement trip reduction measures, or to increase their average vehicle occupancy by 25 percent. As you know, we have been a strong advocate of Senator Rand's legislation, which would essentially provide that legally enforceable mechanism so that we could meet this standard. If we do not get it, we will have to turn to DEPE to implement this requirement by regulation. The advantage of you all passing legislation is that the legislation provides significant, first of all, input from the business community into drafting the regulations, and it provides a significant amount of tax incentive for them to carry out this measure. DEPE will not be in a position of providing those incentives if they have to do it simply through regulation.

The third point: The Clean Air Act went further, in essence, in getting into our business. Last year, and certainly this year, with increasing stringency, we will have

to submit our entire capital program, the \$1.4 billion capital program that we have proposed to many of you in hearings, to the test that this program does not increase net VMT, or vehicle miles traveled; that if we have, say, a capacity enhancement that we are planning, we have something else to counterbalance it that will essentially reduce VMT. For example, we might have a rush hour lane or a HOV lane that would counterbalance a major highway widening. These requirements will become increasingly stringent. It is our entire capital program, in essence, that is held hostage to this kind of a requirement. It is something that the Department of Transportation has never had to meet before, and you will increasingly hear us in communication with you saying that we are not sure that we can get this through the Clean Air standards. It is this requirement that we are concerned about.

Finally, I want to say a few words about dual risks that we face. First of all, you heard the Commissioner from EPA talk about the mandated sanctions. In the past, in essence, EPA could sanction you if you did not submit a SIP, but they couldn't look at the individual components and pick them apart. Now they can. So we might go ahead and submit a State Implementation Plan, but let's say it doesn't have quite all the things there, like the employer trip reduction program. They can pick that out and sanction us for that single component, or any of the other components that he went through with his 11-point agenda.

Guess who is at greatest risk for being sanctioned? It is our Department. We face that as early as this November, and the amount could be as much as \$414 million. But we face an even greater risk, candidly, because that sanction would be delayed 18 months, and I am sure that, through a great deal of argument, we might at least mitigate that kind of a sanction.

Our concern is actually in the courts. The Clean Air Act amendments did something that I don't think is fully

understood yet, but we are feeling the effects of right now even as we speak. The average citizen, or environmental group, was given permission to sue the Department of Transportation or the Department of Environmental Protection for not complying with the Clean Air Act. We have some concern that even this November we will be subject to some degree of suit over whether or not the 1993 capital program we have presented to you will meet, in the court's eyes, the test of the Clean Air Act, and put the whole capital program in litigation.

If we are sued, which is valid under the new Clean Air Act, we will have to prove that there is no net increase in vehicle miles traveled; that there is no -- that we have provided the legally enforceable employer trip reduction mechanism; and several other items that will have to go before a court.

Those were the points that I particularly wanted you to understand from our perspective in terms of shaping policy and the cooperation, honestly, that we need from you in order to make sure that the capital program we have presented to you goes to create jobs in New Jersey, which I think is what all of us want to do.

Thank you.

ASSEMBLYWOMAN OGDEN: Thank you very much.

Commissioner McConnell?

COMMISSIONER McCONNELL: Thank you. Madam Chairman and members of the Committee: It is a pleasure for me to be here today and to join my fellow Commissioners who certainly have described that the 1990 amendments to the Clean Air Act will have a far-reaching impact on our State. As you know, we are faced with a Federal mandate which will profoundly affect both individual citizens and the business concerns of our State.

As you know, these are tough times. As Commissioner of the Department of Commerce, my job, my goals, and my objective are to go about my work that pertains to the economic

recovery of New Jersey, and to make sure that New Jersey continues to be an attractive place for business to live, work, and play, and a place that attracts the relocation of businesses to New Jersey.

So my concern with the amendments to the Federal Clean Air Act is, what is the economic impact and what will be the impact on business?

The EPA has estimated that the new requirements will cost the American public and industry \$25 billion annually by the year 2005. We have just heard that noncompliance with the Act will also be costly. New Jersey would stand to lose approximately \$414 million in Federal transportation funding for just this year alone.

So, as Commissioner of the Department of Commerce, my role is to ensure that the economic impact of all proposed strategies is fully considered. I think from the presentations that have been made here today by both Commissioner Weiner and Assistant Commissioner Johnson, their Departments certainly are taking those impacts and those issues under consideration.

There are several broad considerations which our Department is emphasizing: First, we are encouraging a regional approach, which DEP is as well. This is particularly critical to New Jersey because of our unique status as a downwind State, because much of the pollution that is attributed to New Jersey is not necessarily of our own making. As has been pointed out, New Jersey is a member of the regional Ozone Transport Commission, made up of the majority of the northeastern states whose purpose is to identify and implement regional solutions to the ozone problem.

The importance to the regional approach fits into our Department's second concern: We must not adopt requirements which will place New Jersey at a competitive disadvantage with our neighboring states, particularly during this difficult economic time.

Third, we want to make sure that there is private sector input into the process which establishes our strategies. As we have said, the business community is going to be severely impacted by every requirement of the Clean Air Act. So their participation in the process is important. It is essential if we are going to be successful in meeting the requirements of this Act.

Our Department has worked closely with DEP, the Department of Transportation, and Senator Rand in crafting the legislation which addresses the reduction in employee vehicle use component of the Act, better known as the "ride-sharing bill." I believe we now have a bill that not only meets the Federal mandate, but which is workable and demonstrates that our respective Departments, as well as the business community, can work together to come up with a solution. I believe we have a bill now that not only limits paperwork and rewards existing trip reduction practices and provides for ongoing business participation in the process, but includes incentives, as well as penalties, and does not go beyond the Federal mandate.

Our Department is also working with DEP to set up the Small Business Technical and Environmental Assistance Program that is mandated by the Act in our Department.

I guess my message here today is perhaps threefold: We support the regional approach. We recognize the importance of having the business community's input in developing strategies for implementation and compliance with this Act. And we are committed to working together, not only with my fellow Commissioners here and the departments within the administration, but with the business community, to come up with those workable solutions.

I know this is a difficult new mandate, but clean air and a healthy economy can be achieved at the same time if we proceed with caution, and if we take into consideration all of

the potential impacts. I know that you will. I know that my fellow Commissioners will. And our Department, and our constituency, certainly will be working together to achieve those goals.

ASSEMBLYWOMAN OGDEN: Thank you. Any questions?

SENATOR McNAMARA: No.

COMMISSIONER McCONNELL: Thank you.

ASSEMBLYWOMAN OGDEN: Commissioner Weiner, in looking over the other options to close the gap -- going back to your presentation -- the Off Highway Program, industrial equipment appears to be a big winner in terms of reductions -- 25 to 42 tons of the volatile organic compounds and 9 to 15 of the nitrogen oxides. In fact, that is greater than the last program. Then the next category underneath, "aircraft, railroad, commercial vessels," again is 6 to 10 on the volatile organics and 23 to 36 on the NO_x. Are there problems with considering both of those?

COMMISSIONER WEINER: There is a practical challenge; I wouldn't say it is a problem. But those types of things, particularly when you think of aircraft, railroad, and commercial vessels-- That is something that would have to be done on a national basis through Congress, effectively, when you think about aircraft regulation and interstate transportation. Industrial equipment is something we are looking at. The cost per ton is five times higher. So when you look to see the issues of burden sharing and implementation-- We have aggregated up, so if we were to say that we were going to deal, for example, with some subset of industrial equipment -- forklifts as opposed to this, or jackhammers as opposed to forklifts -- we would probably be able to get some incremental benefit. These are issues the OTC will be looking at. But because of the incremental cost per ton, because of the difficulty in the marketplace to get to those, and since you would have to do all those things, not

just some small subset of them-- There was a consensus throughout the region that the place to look was at the automobile tail pipe.

When one talks about costs-- Let me just anticipate potentially a point of confusion: There has been a lot of debate between \$170 a car for LEV versus \$1000 a car. The \$1700 that we indicated is not the cost per car. That is the cost per ton. We are still adhering to \$170 per car, so there is no mistake. In fact, on Monday, it is my understanding that somebody got up -- either somebody from the oil industry or from the automobile industry -- and said, "California has now signed onto the \$1000 per car number." We were surprised, but it could have been, so we called California. We found out from California that they didn't know what we were talking about. In fact, not only are they adhering to the \$170 number, but they believe the number will go lower. Today you can buy the type of catalytic converter you want on the street, and put it into a car for under \$250 -- they tell us.

As it gets implemented throughout just their market, one can expect the cost to go down. Unfortunately, when people participate in this debate-- As we have all discussed, there are pros and cons to this -- as you point out. There are other things to think about. But somehow or another, veracity sometimes gets lost in the discussion, and that has been very disturbing.

ASSEMBLYWOMAN HECK: We were talking about automobile tail pipes, but what about the bus tail pipes, New Jersey Transit buses in particular?

COMMISSIONER WEINER: Well, let me say something, and then I think Assistant Commissioner Johnson will want to say something.

There are a number of projects we are working on jointly on buses. There are two things I want to talk about: One is alternate fuel buses. New Jersey Transit now has a

demonstration bus where we are using compressed natural gas. We, as a State, are using compressed natural gas as a fuel of choice. We expect that will prove successful and we will be able to put that out throughout the fleet.

Also, in terms of vehicle particulate -- diesel particulate violations, the big black smoke that we all see which disturbs us, out of trucks and buses-- You may recall that there was an announcement a few months ago with my Department, the Department of Transportation, and Law and Public Safety on an inspection program that will be implemented next year, as well as some standards that will go into place.

ASSISTANT COMMISSIONER JOHNSON: Well, ultimately, New Jersey Transit will be required to increasingly move to alternate fuel vehicles. You have seen in the capital program that we have presented to the Assembly and the Senate, in essence, provision for gradually moving in that direction.

ASSEMBLYWOMAN HECK: It has also been mentioned to me that it would be easy to cite the trucks and the buses as they approach the turnpikes and the State highways.

COMMISSIONER WEINER: We are going to have an inspection program--

ASSEMBLYWOMAN HECK: And deny them access to those routes.

COMMISSIONER WEINER: That could be a very compelling enforcement tool.

SENATOR McNAMARA: Ron?

SENATOR RICE: Are we saying we are going to take the State Police vehicles and roll them over, or convert them? And are we saying we are going to have to take county and local government vehicles and convert -- or at least turn those fleets over, emergency vehicles and all of that? See, the State can cry, "Broke," and we can cry a billion dollar deficit, but we can always come up with more money to do those things than local government can. Is that what you're saying?

COMMISSIONER WEINER: Well, that is a very good point.

SENATOR RICE: I know it's a good point. I have a \$41 million deficit up in Newark.

COMMISSIONER WEINER: Well, we will talk about the City of Newark, rather than the State. As the City of Newark replaces its fleet -- its entire fleet--

SENATOR RICE: Yes?

COMMISSIONER WEINER: --not the Act, not the Department, nobody saying, "Tomorrow you have to go out and buy all new cars--"

SENATOR RICE: Right.

COMMISSIONER WEINER: But as you replace them, you will be replacing them with cars that burn cleaner and can go on a little bit of fuel. So, for example, some facilities, like the State, are now considering conversion of some of our existing fleet. We will be converting 200 vehicles in the State fleet as a demonstration. My prediction, Senator, is that three, four, or five years from now, as any fleet operator -- public or private -- goes out, they may be procuring electric cars; they may be procuring some compressed natural gas vehicles, not necessarily for police cars, but possibly for inner-city messenger services, for transportation facilities like the buses. One of our strategies is, if you have to get to these standards, particularly for a fleet operator -- and we will go into this in great detail on Thursday -- and if the technology exists, as it does, to achieve these tail pipe emissions, then what we want to do as a region, not just New Jersey, is say to the community -- the automobile and petroleum community, the fuel community -- "Here is the standard we want to get. Get us there. Get us there over a period of time." Unlike the Federal standard, which is one standard that goes in, these are five standards, and the only program that--

So, the reality is yes. As Newark, as the State of New Jersey, as New Jersey Bell, as any fleet operator of 10 or

more vehicles retires and replaces its fleet, three years, five years, seven years from now, they are going to be buying vehicles that are going to be filled with different types of fuels, including reformulated gasoline, and they are going to have cleaner emissions.

SENATOR RICE: Is there any way you can help us to get legislation, since all the State workers and corporate workers have to come into town -- most of our workers don't live in town, believe it or not -- so they won't get a car tax?

COMMISSIONER WEINER: That goes into pricing strategies.

SENATOR RICE: Okay. I'll keep that in mind.

ASSEMBLYWOMAN OGDEN: Who is going to sponsor it?

SENATOR McNAMARA: That's exactly right.

Are there any other questions?

ASSEMBLYWOMAN OGDEN: Questions or comments?

ASSEMBLYMAN KRONICK: Thank you. Commissioner, I would think that the cost per ton would be one of the most important driving factors in making a decision. When I look, for example, at spending \$400 per ton to achieve a reduction of 48, it sounds far better than spending \$20,000, as we would with transportation control measures where you only have an 8-ton reduction. Wouldn't that be very significant?

COMMISSIONER WEINER: Sure.

ASSEMBLYMAN KRONICK: Then when we get to this last page, where we are talking about spending \$10,000 -- here it is, \$20,000 and \$14,000 on trip reduction-- That certainly doesn't make sense.

COMMISSIONER WEINER: I agree with you. The point I tried to make was, all of us in the administration, in proposing strategy, have been very sensitive to the economic impact and the cost implications. But there is another side to it. For example, if you look at the "other options" page, life-style strategies, it is only \$500 a ton. It is not an

expensive strategy to implement. These are what most people refer to as "draconian" strategies. They are inexpensive, but on behalf of all of our neighbors, and all of our friends and relatives in the State, are these the things that we really want to look to? Do we want to look to those types of issues?

Our position has been, "No"; that before we begin making those types of dramatic life-style changes, through public education, through efforts, and all the things we are doing collectively, we want to get people out of cars and into mass transportation. We want to get cleaner burning fuel sold in the State. We want to get cleaner burning vehicles sold in the State. And if all of that doesn't work, one of the last things we will look to is saying to somebody, "You can't drive to school; you can't use the drive-in window at the bank," because even if it is only \$500 a ton, that type of economic impact in our economy, I think, would be devastating.

ASSISTANT COMMISSIONER JOHNSON: If I could follow up with an answer to that--

Assemblyman Kronick, one of the reasons I emphasized the new transportation control measures were essentially good transportation policy-- We recognize that you are not getting as much bang for the buck in this measure as you are in some other things. We grant that, but they are terrific congestion strategies. So what we are getting out of them is, instead of widening a highway, we are getting, in some instances, the same effect as the widening of a highway in congestion reduction, as well as cleaning up the air.

ASSEMBLYMAN KRONICK: Thank you.

ASSEMBLYMAN SOLOMON: One brief question. Did I interrupt somebody?

ASSEMBLYWOMAN OGDEN: No, that's all right.

ASSEMBLYMAN SOLOMON: Thank you. Assemblyman Kronick raises a good point. I was looking at some of the figures of the costs. The one thing that makes me question what the

validity is of the other numbers is, I see "Expanded Employer Trip Reduction" at \$20,000 a ton. I couldn't figure out how in the world reducing the number of cars, or increasing the number of people per car, would increase the cost. In fact, to the consumer, it is cheaper if you put four people in a car than three people in a car; four people in a car than one person in a car. To the employer, it would seem to be less expensive, less parking facilities, less ingress and egress. Why is that \$20,000?

COMMISSIONER WEINER: Let me get the model component.

NANCY WITTENBERG: (speaking from audience) Well, when you consider the cost to the employer -- and Christine can probably speak to this as well -- in developing the plan -- a plan for how you are going to implement this measure, the employer has to set up the program and put in the enforcement mechanism to make sure that it works. Most of the cost is on that sector of the economy, not so much on you or I who would be carpooling, but there is a significant cost there.

ASSEMBLYMAN SOLOMON: So you put on the front-end costs, but you don't take off the back-end savings. In other words--

MS. WITTENBERG: You do both; you do both. But there are significant costs there. When you are talking about going down to employers of 50 or less, those are relatively small companies. They wouldn't possibly have the expertise in-house to figure out how to implement these plans to reduce the average vehicle occupancy. They are going to have to hire somebody.

COMMISSIONER WEINER: Well, in addition, some of the things they do, and what we will have for you on Thursday--

That was Nancy Wittenberg, for those who do not know Nancy here. Nancy is the Director of the Office of Energy and Air, and she serves as the senior staff person coordinating interagency work.

There are computer models they use to arrive at these numbers as to how we factor all this in. But as you get down to 50, there is also the cost of incentives--

MS. WITTENBERG: Yes.

COMMISSIONER WEINER: --and I wanted to see what was in our model. But now, 50 employees is not a big company. "What is going to be the cost to the employer," Nancy said, "to get people out of their cars?" Are they going to be buying vans? There are good benefits to it. It is a good societal strategy to pursue. But the aggregate cost to get that kind of tonnage out in terms of incentives, in terms of providing vehicles and the like, is estimated through the modeling to come up with that number.

ASSEMBLYMAN SOLOMON: I guess I will wait to hear what the methodology was. I was just-- At least there was some way that you arrived--

COMMISSIONER WEINER: Oh, sure.

ASSEMBLYMAN SOLOMON: When I saw \$20,000 a ton-- I am still anxious to hear how you got to that number. I would be curious to hear what the number is on the larger--

COMMISSIONER WEINER: There is one other thing--

ASSEMBLYMAN SOLOMON: --but not today. (laughter)

COMMISSIONER WEINER: If I may just point out one other thing as you do this: In order to get the tonnage reduction, every ton gets more difficult to get, no matter where it is coming from. So if you start at 1563 and you take out 400 tons, that last 100 tons is tough. You will see, for example, increasing the top 25 VOC emitters -- by increasing their reductions by another 50 percent-- It sounds nice. We will just drop them down 50-- We have already taken them down 75 percent. We have really, as a State, worked hard on those emitters. Now we are going to say we take another 50,000 -- 50 percent-- It becomes big money, but we will provide the modeling and the theories for that.

ASSEMBLYMAN SOLOMON: I was just curious. Thank you.

ASSEMBLYWOMAN OGDEN: Assemblyman Warsh?

ASSEMBLYMAN WARSH: Thank you, Madam Chairman. Commissioner Weiner, we heard testimony from Director Simon from the EPA that the State failed to meet the March 15, 1991 deadline for regs on VOCs. We also heard that there is a series of deadlines in order to gain compliance with the Clean Air Act -- about 10 deadlines.

One of the biggest criticisms that your Department is facing is that it is a management nightmare. Nothing seems to get done on time. Is this something we can expect throughout the rest of the process in terms of coming into compliance?

COMMISSIONER WEINER: No. I don't know if you were here for my opening remarks, but I pointed out that when I came into the Department we found that this was a little slower than we had expected. We were not alone, in terms of other states that found themselves in the same position; that the rules were promulgated by the May 15 deadline; that we had been working with EPA along the way. And, as Mr. Simon pointed out, we have adopted the rules and they are pending. We expect EPA approval. We are, in fact, now ahead of many of our sister states which are in the same position.

Also, our work on all of these deadlines is on target. The rules are coming out. We can spend some time-- Just for the sake of brevity, I didn't discuss oxygenated fuel. That will be coming out in a couple of months. Earlier this week, I provided -- and I will provide you with a written summary of it -- all the rules that we will be publishing over the next year, the time frame of when they will come out, and what the compliance dates are. I can tell you that we will be making every compliance date.

ASSEMBLYMAN WARSH: Thank you.

ASSEMBLYWOMAN OGDEN: I just have one brief question for Assistant Commissioner Johnson: In terms of the entire FY

'93 capital program to be tested for its impact on the air quality, it is my understanding that most of the several hundred million now is not really going in that direction. So I wonder, who is going to blow the whistle on this -- the EPA, the DEP? Who is going to, you know, hold DOT to the standard?

ASSISTANT COMMISSIONER JOHNSON: Well, we are required to certify at the MPO level that our Transportation Improvement Program, lovingly know as the TIP, which mirrors the capital program, is in conformance with our State Implementation Plan. Since we will not have a State Implementation Plan by then, that it does not, in net effect, increase vehicle miles traveled.

We have a series of models that will do that, but we know that right now we are undergoing questions from the Environmental Defense Fund and others about the certification that was made for the 1992 program, because we had to submit our 1992 program to the same kind of test. You are correct, Assemblywoman Ogden, that a large portion -- over half -- of our program is simply going for systems preservation; just rebuilding what we already have. We have very little going into capacity enhancement. We believe that we should be in pretty good shape, but it is important, I think, for you, as legislators, to understand that we do go through this test.

SENATOR McNAMARA: Assemblywoman, I might add that the certifications are most probably the same familiar type of certification that the Governor gives as to revenues.

Can we call the next two witnesses? I have a conference at 12:30.

ASSEMBLYWOMAN OGDEN: Oh, all right.

SENATOR McNAMARA: Okay?

ASSISTANT COMMISSIONER JOHNSON: Except that we are subject to suit.

COMMISSIONER WEINER: Thank you very much.

SENATOR McNAMARA: We will begin again on Thursday.

ASSEMBLYWOMAN OGDEN: The last two witnesses today will be Dr. Leah Ziskin, from the Department of Health, and Dr. Goldstein, from the University of Medicine and Dentistry of New Jersey.

DEPUTY COMM. LEAH Z. ZISKIN: Good morning, Senator McNamara, Assemblywoman Ogden, members of the Committee. I am very pleased to be here on behalf of Dr. Frances Dunston, our Commissioner in the Department of Health.

Clean air is something we once took for granted, but for a long time that has not been the case. As you have heard today, more than two decades ago Congress passed the Clean Air Act to protect Americans from adverse health effects caused by high levels of toxic chemicals that were poisoning our air.

In the case of several of these substances -- lead and sulfur oxides, for example -- considerable progress was made. But others -- especially ozone -- proved to be more stubborn, and the persistence of high levels of ozone in New Jersey's air is a serious public health problem. It is making people sick; if unchecked, it will make more of us sick; and it is costing us money -- a lot of money.

Recently you have probably heard about the depletion of the ozone layer and may be thinking why are we talking about too much ozone. The ozone we are talking about today is ground level ozone and not the ozone layer in the upper atmosphere.

Ozone is probably the worst offender in causing New Jersey's air quality to be unhealthy, and I will call your attention to the poster on that wall that lists the immediate health effects and the long-term health effects caused by high ozone levels.

On 15 percent to 25 percent of the days from May through September, New Jersey's levels of ozone exceed the Federal health standard, and in particularly bad years, like 1988, unhealthy ozone levels were registered on as many as 60 percent of our summer days. We think that is alarming. In

fact, it has caused the Health Department, for many years, to issue a bulletin to New Jersey physicians -- and we are getting our current one ready -- reminding them of the adverse health effects from ozone exposures.

It is alarming because these adverse effects are both numerous and serious, and they affect everyone who breathes. Let's consider them for a moment:

First and foremost, ozone is a respiratory irritant. It causes inflammation and irritation of the throat and lungs, wheezing, coughing, tightness of the chest, and pain or difficulty in breathing. There is also considerable evidence of long-term adverse effects, including permanent losses in lung function.

Decreases in lung function resulting from the above have been observed in healthy exercising adults breathing ozone concentrations equal to those often measured in New Jersey during the summer.

For the more vulnerable among us -- children, the elderly, and those already suffering from respiratory problems, such as asthmatics -- the consequences are potentially more severe. There have been several recent studies examining the effect of high ozone levels on New Jersey children at summer camp. The results of these studies are clear: When ozone levels are high, children have significant decreases in lung function and increases in respiratory symptoms.

Those with preexisting respiratory problems suffer most. When ozone levels are high, hospital visits and admissions for asthma increase by as much as 30 percent. The number of asthmatics in this country is steadily increasing as well, as are deaths from asthma, and this occurs especially in our urban areas and among our minority populations.

These very serious health effects alone should be all we need to know to persuade us to reduce air pollution, and especially ozone levels in our State. But there is one more

adverse effect, and it is expensive. A recent article in the prestigious "New England Journal of Medicine" estimated the total national cost of illness related to asthma in 1990 at \$6.2 billion, including \$1.6 billion in hospital inpatient care costs. When exacerbated by such factors as air pollution, this sometimes, or most often mild chronic illness is sending New Jerseyans to emergency rooms and putting them in hospital beds. It is also keeping them out of work and out of school.

As you well know, we are living in an era of spiraling health care costs. The cost of health care has become one of the nation's most pressing concerns. Here in New Jersey, we are committed to lowering the cost of health care, as well as the incidence of preventable diseases. This is yet another reason -- although there are many -- that propel us to do all we can to improve the quality of New Jersey's air.

Thank you for this time.

SENATOR McNAMARA: Dr. Goldstein?

B E R N A R D G O L D S T E I N, M.D.: Senator McNamara, Assemblywoman Ogden, members of the Committee: Thank you for this opportunity. I am going to be brief.

I agree with what Dr. Ziskin has said. I will just tell you a little bit about myself and a little bit about what I think is the major problem here. I will try to impress you with the fact that this is a public health problem, and that the Clean Air Act, despite all of the issues we must work through, is a public health act.

I am Dr. Bernard Goldstein. I direct the Environmental and Occupational Health Sciences Institute, which is a joint program of Rutgers University and the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School. I also Chair the Department of Environmental and Community Medicine at the Medical School. I have served in many capacities as adviser on air pollution matters. I chaired EPA's Clean Air Scientific Advisory Committee; served as

Assistant Administrator at EPA under Bill Ruckelshaus, Research and Development -- and worked with the World Health Organization in this area.

At our Institute, we have about \$14 million worth of extramural research; that is research that comes mostly from the Federal government. About half of it is directly or indirectly related to air pollution health effects.

Let me tell you how concerned we are about ozone. We do, perhaps, as much work, or more, on benzene as we do on ozone. Benzene is an air pollutant that is part of the volatile organic hydrocarbons. It is, certainly, a target of the Clean Air Act. It causes leukemia, which is a very fearsome disease. Yet I will tell you that I, personally, as a physician, am far more concerned about the public health impact of ozone on the State of New Jersey's residents, including my family, than I am about benzene.

Why is that? Well, as a toxicologist, one of the old tricks in toxicology, outmoded now, but something we did in the past, was to-- When we dealt with a new compound -- the chemical industry giving us new compounds all the time -- what we did was put animals into an exposure chamber. We exposed the animals. We calculated what level of the compound killed half of them -- the LB 50 test -- and then we took a factor of 1000 below that as being reasonably safe for workers; maybe 10,000 if we were going to go to the general public.

Most pollutants that we were concerned about were within that range. The levels of ozone that we are going to have in New Jersey this summer are only about 20-fold below the levels that I will kill laboratory animals at in an exposure chamber in our Institute -- only a 20-fold difference. We are getting close to levels that are desperately of concern, particularly considering the mechanism by which this occurs. There is not any trigger that somebody turns on or off. Ozone,

at almost any level, is an irritating agent which causes almost a chemical burn.

Let me give another example of the kind of reason why we are concerned about this. I mentioned workplace standards. We know that in every case, a workplace standard is less stringent than the general environmental standard. There are children out there; there are the elderly; there are the people who are ill. So in the general environment we should have a more stringent standard. I said every case, but there is one exception, and that is ozone.

Because we have a one-hour standard for ozone, .12 parts per million, and an eight-hour standard in the workplace of .10 parts per million, we will have days this summer, as we have had every summer in the past couple of years that we have been following this-- We will have a number of days in which the level of ozone will get up to about .11 parts per million and stay there through the day. A one-hour standard is not appropriate for us in New Jersey, because we really have day-long ozone episodes. Think of it: .11 parts per million all day long. We won't have exceeded the Federal standard; we won't show up on these charts. But for the children out there playing during that eight hours -- it is a nice summer day that this occurs -- they will have exceeded the workplace standard. We won't let workers be exposed to what we are letting children be exposed to for ozone. There is some problem there when you think about that.

The other issue about ozone that concerns us, as compared to other pollutants, has to do with what happens if we put somebody into an exposure chamber with ozone. If I took any of you I could find a level of ozone which would cause a narrowing of your airways; say, a 20 percent narrowing of your airways. You would feel it; you would feel some constriction. It wouldn't be a problem to you unless you were an asthmatic or ill to start with. I could pick a level of sulfur dioxide,

which does the same thing. Sulfur dioxide is one of the pollutants we have controlled. Sulfur dioxide works through a reflex, much like tapping your knee and watching it bounce. If I keep you in that chamber, that effect goes away. The tightness in your chest will go away; the bronchial constriction will no longer be measurable, even though you are still breathing the sulfur dioxide. If I keep you in that same chamber and it was ozone that did that, the effect would get worse and worse and worse. So if you were there for two hours, instead of one hour, it would be twice as bad, and it would just keep on going down.

The reason for that is that, as I say, sulfur dioxide, and many other pollutants, work through reflexes which they are triggering in the airways, causing the muscles to constrict, much like an asthmatic has the reflex occur when they are breathing something they are allergic to. Ozone, on the other hand, causes inflammation. It causes an inflammation of that airway, much as if I scratch my skin. We all know that if you keep on inflaming the same area, you scar it, and that leads to one of the public health problems which we can only conjecture about, but yet are very concerned about.

The concern is that many, many years of exposure to ozone, recurrent exposures, will lead to chronic lung disease. We don't know that. It is very hard to do those kinds of studies. The Federal government, in fact, is right now funding a number of studies to try to look at that; to try to tease out this information, but there is every reason to suspect that this is true. Because of the scarring effect, because of the inflammatory effect, because of what we see in laboratory animals, and we know happens in humans in terms of short-term effects, we suspect that this is going to occur from a long-term point of view. Again, this goes into our fears, our public health concerns about ozone.

Let me conclude by talking about Mexico City. I am chairing a conference at the U.N. tomorrow which is going to talk about environmental medicine around the world. I think you know that Mexico City has had some very major problems. It is a poor country, a beautiful city, yet they have had to embargo the use of automobiles and shut down industries because of air pollution. We are not Mexico City, but the question is: Could we become Mexico City? After all, we have even more automobile use. We have similar industry patterns. We have a population density that is very great, the greatest of any state in the country. We certainly don't have the geography. That protects us a bit. But the major thing that is protecting us is that we are, and have been, putting controls on the emission sources.

Conrad Simon, I think, was very perceptive and astute when he pointed out to you that if we leave things just as they are, they will get worse in time because there is going to be more traffic, more-- Just getting down here on Route 1, that traffic jam takes longer. If a geographical distribution of traffic jams increases-- So, that will increase-- There will be an increase in the pollution sources.

There is another area which makes us concerned about it getting worse that Connie Simon did not mention, and I don't blame him for not mentioning it; given that I have been a bureaucrat at EPA and I would not have mentioned it either-- But there is this thing called "global warming." One of the things we don't focus on is that if it is going to get warmer here, and it seems like it will, the ozone is going to get worse. For any given level of ozone -- or precursors of ozone that you have -- you've got more warmth, and you are going to have more ozone at this lower level, the kind of ozone that we are talking about today. Now, I don't know how much. We are doing a study to try to model that. We will come out with some number, and everybody will poke holes at it.

I don't think that is as important as just recognizing that that is the direction we are going in. That is almost certain; that that is the direction we are going in. That is another reason why we must think proactively about what to do about this public health threat.

Well, let me thank you, and offer to answer any questions.

ASSEMBLYWOMAN OGDEN: Thank you. Are there any questions from members? Dave?

ASSEMBLYMAN KRONICK: We will be hours running late, but I am just so concerned about what you said. If you took an adult who lives, say, where it is very high, we'll say in Bergen or Essex or Hudson County, compared to where it may be marginal, what would you see in their lungs or chests? I mean, have you done that?

DR. GOLDSTEIN: Right now I cannot point to any study that says there is a difference with someone who has lived in those places for 30 years. Now remember, the only place we have in the country which has had significant ozone air pollution for that period of time is southern California. Epidemiologists will tell you that the last place in the world they want to find someone who has lived for 30 years is southern California. The mobility patterns of such are very difficult. The attempts at studies do seem to show that there is an effect, but it is not unequivocal; it is suggestive. There are studies being done on autopsies of people dying in automobile accidents, looking at where they lived and looking to see if they can see a difference in the lung structure that might be related to ozone, and there seems to be a difference. But I would need to be absolutely sure about that and know the smoking history of all those individuals, and, you know, you don't always get that at an autopsy.

I could go on at great length as to why there are experimental difficulties in doing these studies. That is why

I am being very careful in saying, "I can't prove that to you." But I am, from a public health point of view, concerned about the implications that there are likely to be.

ASSEMBLYMAN KRONICK: Would young children be more vulnerable than an adult?

DR. GOLDSTEIN: Yes, because their lungs are developing. It is much the same way as young children are more susceptible to lead than adults, because the brain is developing. Young children because the lungs are developing, would be more susceptible. It is certainly true in young laboratory animals.

ASSEMBLYMAN KRONICK: Thank you very much.

ASSEMBLYWOMAN OGDEN: Any more questions? (no response)

SENATOR McNAMARA: Well, I would like to thank all of those who testified today, and also my colleagues from the Assembly and from the Senate side, for your patience and endurance. We will be back on April 9 at 10:30 in the morning.

Maureen, do you have any comments?

ASSEMBLYWOMAN OGDEN: We will be in the same room.

Thank you all.

(HEARING CONCLUDED)

APPENDIX

**Testimony of
Conrad Simon
On
The Requirements of the 1990 Clean Air Act Amendments
April 2, 1992**

My name is Conrad Simon and I am the Director of the Air and Waste Management Division of the Environmental Protection Agency's Region II office, located in New York City. I would like to thank you for giving me this opportunity to present testimony on behalf of the EPA on the requirements of the Clean Air Act Amendments as they apply to New Jersey.

The best known of the Clean Air Act Amendments are contained in the Acid Rain title. In this title the Congress has created a market based plan to reduce emissions of sulfur dioxide by 50 percent nationally from 20 million tons per year in the mid-1980s to 10 million tons per year by 2010. The electric power plants that will bear the brunt of this program are located primarily in the midwest.

The provisions which will have the greatest impact on New Jersey are those dealing with the control of mobile sources, the establishment of a federal operating permit program and the establishment of a new air toxics control program based on the use of maximum achievable control technology standards.

In order to address reductions in mobile sources the Congress has established stringent new tailpipe standards for automobiles. It has also directed EPA to establish new guidelines for states to use in developing enhanced inspection and maintenance (I/M) programs for metropolitan statistical population centers of greater than 200,000 in areas classified as serious, severe or extreme and in areas with a population of 100,000 or more in the ozone transport region.

This is very important for the State of New Jersey where over the past several years the I/M program for in-use vehicles has been very substandard. EPA has developed a proposal for a "high-tech" centralized system using a dynamic test mode and a pressure test procedure that will provide a high degree of emissions reductions. New Jersey would do well not only to adopt this type of program in a timely fashion but to implement a program which provides the greatest amount of emissions reduction obtainable under this system.

Under the Amendments major sources must obtain renewable operating permits and pay an emissions based fee of a minimum of \$25 dollars per ton. There are new definitions of what constitutes a major source -- the more severe the pollution problem, the smaller the size of the source labelled as major. States that obtain authorization to operate this program will have to dedicate the permit fees to the operation of the stationary source control program. Unfortunately, the funds collected under the program cannot be used to administer the mobile source program. Thus, states with significant mobile source problems will need to find alternative sources of funding. States that fail to accept the program will be subject to a limitation restricting the growth of new industrial sources and the cut off of highway construction funds. It is important for the legislature to provide the Department of Environmental Protection and Energy with the authority to operate this program as soon as possible.

It is in the best interest of the people of New Jersey that every effort be made to pass legislation to authorize the operating permit program and other key strategies as soon as possible. It is also in their best interest that funds be made available to the air pollution control program to prepare and implement required regulations as soon as possible.

With respect to the air toxics program it may be too early in its development to point out issues that may be of specific interest to New Jersey. However, these amendments have established a new method for dealing with toxic air pollutants that should overcome the unworkable and cumbersome procedures of the old law. Under these amendments, EPA will establish Maximum Achievable Control Technology standards for 180 industrial source categories and 189 pollutants. These standards will be developed and based on the emission reductions achieved employing demonstrated technology. As new technologies are developed, they will become the new standards for the next generation of controls; and so on, and so on.

In order to provide incentives for industry to develop new technology, EPA will grant relief to those industries that achieve a 90 percent reduction in emissions prior to the time when new standards are set. This relief is for six years beyond the timetable for getting into compliance with new standards whenever they are set. This Early Reduction Program will stimulate new technology and at the same time bring early public health protection.

Under the air toxics program, major sources will now be those that emit 10 tons/year of any hazardous air pollutant or 25 tons/year of a combination of two or more hazardous air pollutants. Under the previous law, a major source was defined as one that emitted more than 100 tons of a pollutant per year. Note also that under the new law, a major source of VOCs is defined on the basis of the classification of the area. For a severe area, a major source is one that emits 25 tons or more of total VOCs.

There are some characteristics of the Amendments which I consider important to identify for purposes of later discussion.

The Amendments:

- Are comprehensive and prescriptive (except with respect to facility standards),
- Address source control, as well as planning and management of growth and development,
- Contain provisions that make the law more practical and realistic than predecessor laws, and
- Classify areas of the country in air quality terms on a pollutant-by-pollutant basis.

All of New Jersey for example, is attainment for particulate matter, lead and oxides of nitrogen.

All of New Jersey is attainment for sulfur dioxide except for small portions of Warren County which were determined to be nonattainment. These are areas which are predominantly impacted by power plants located in Pennsylvania. A two year study is currently underway to identify the amount of emission controls which will be necessary at these power plants to provide attainment of the standards.

Residents of New Jersey, however, continue to be exposed to unhealthful levels of ozone and carbon monoxide despite the considerable investment that has been made in pollution reduction activities in this State.

Carbon monoxide problems are more localized in nature, with exceedances of the standards occurring primarily in the vicinity of the heavily trafficked and congested roadways of northern New Jersey. Exceedances of the carbon monoxide standards are of concern to us because uptake of carbon monoxide by the blood disrupts the delivery of oxygen to the body's tissues and organs.

This effect is especially harmful to people who suffer from cardiovascular diseases.

Over the past few years we have experienced improvements in carbon monoxide pollution levels. These can be attributed to the improvement in tailpipe emissions of new automobiles. However, we expect this trend to continue for only a limited amount of time since growth in vehicle miles travelled and the relatively low effectiveness of the State's current I/M program are offsetting this tendency. Therefore, carbon monoxide air quality remains a source of concern to us.

Because the maximum concentration for carbon monoxide does not exceed 16.5 ppm Camden, Bergen, Hudson, Essex and Union Counties and the southern portion of Passaic County are classified as "moderate" nonattainment.

Our observations show that all residents of New Jersey are exposed to unhealthful concentrations of urban ozone. Ozone, or "smog" as it is commonly known, attacks the lung tissue and respiratory system and, even at low concentrations, reduces the ability of our lungs to function effectively. Individuals with impaired respiratory systems, such as asthmatics, are most severely affected by this pollutant. However, even the health of healthy children and adults has been determined to be impaired by high concentrations of ozone. This pollutant is estimated to cause 2 billion dollars nationally in damages to commercial crops and forests annually. It has had and, undoubtedly, will continue to have its effects on New Jersey's agricultural industry.

Over the past five years, there were 143 days when at least one site in the entire state exceeded federal health standards for ozone. The vast majority of these violations occurred between Memorial and Labor Days. There were many other days during this period when ambient ozone concentrations, while not exceeding the

federal standard, were only slightly below it. Some reputable experts on health effects say that this should also be a cause for concern.

We are also concerned that emissions from sources in New Jersey travel downwind to New York, Connecticut and other parts of neighboring New England to cause ozone nonattainment in those states. In fact, concentrations of ozone in southern Connecticut are the highest observed outside of California and exceed the federal health standards by 70 percent. Much of this problem can be attributed to emissions from New Jersey and New York. Downwind states cannot do enough by themselves to attain ozone standards for their own residents without major emission reductions being made by New Jersey. It is also true that much of the precursors causing New Jersey's ozone problems are exported to New Jersey from states to the west and south.

The 12 New Jersey counties in the greater New York Metropolitan area are classified as severe II nonattainment because the air quality design value is between 0.280 ppm and 0.190 ppm. The six counties comprising the greater Philadelphia area are classified as severe I because their design value is between 0.190 ppm and 0.180 ppm. The Atlantic City area is classified as moderate with a design value between 0.138 ppm and 0.160 ppm and Warren County, which is part of the Allentown-Bethlehem-Easton Metropolitan area, is classified as marginal with a design value between 0.121 ppm and 0.138 ppm. The Clean Air Act Amendments are particularly realistic in that they set different timetables for each type of area. For example the deadline for attainment for the State in the northern counties is the year 2007. The deadline for the Philadelphia area counties is 2005. But, to ensure substantial early reductions in emissions and substantial progress toward attainment, the Clean Air Act Amendments set certain specific requirements that all ozone nonattainment areas must meet by November 1992 and a number of specific activities that the State

must undertake to ensure that its programs are sound. They are as follows:

Measures to be Adopted/Submitted by November 15, 1992

Correction/Fix-up of Reasonably Available Control Technology Rules for Volatile Organic Compounds by May 15, 1991

Enhanced Inspection and Maintenance Program by November 15, 1992

Reasonably Available Control Technology Rules for Volatile Organic Compounds by November 15, 1992

Reasonably Available Control Technology Rules for Oxides of Nitrogen by November 15, 1992

New Source Review Regulations for Volatile Organic Compounds, Oxides of Nitrogen and Carbon Monoxide by November 15, 1992

Oxygenated Fuels for Carbon Monoxide Control by November 15, 1992

Criteria and Procedures for Determining Conformity Between the State Implementation Plan and Transportation Plans by November 15, 1992

Stage II Vapor Controls at Service Stations by November 15, 1992

Employer Trip Reduction Programs by November 15, 1992

Transportation Control Measures for Offsetting Growth in Emissions from Growth in Vehicle Miles Travelled by November 15, 1992

Specific Activities to Ensure Soundness

Prepare Comprehensive Emission Inventories for Volatile Organic Compounds and Oxides of Nitrogen by November 15, 1992

Build up of State Staff to Develop and Implement the State Program

Long Term Planning to Achieve Standards

Reformulated Gasoline

"High-tech" Enhanced Inspection and Maintenance

Discussion of Measures to be Adopted/Submitted by November 15, 1992

Correction/Fix-up of Reasonably Available Control Technology Rules for Volatile Organic Compounds by May 15, 1991

New Jersey was required to correct a number of deficiencies in its rules for controlling volatile organic compounds. The State submitted the adopted corrections on March 13, 1992 and we are in the process of formally approving these regulations as part of the State Implementation Plan (SIP).

Enhanced Inspection and Maintenance Program by November 15, 1992

New Jersey must commit to the adoption and a schedule for implementation of an enhanced inspection and maintenance (I/M) program which is to be fully described in a subsequent SIP submittal which is due in November 1993. I will speak further on the benefits of enhanced I/M shortly.

Reasonably Available Control Technology Rules for Volatile Organic Compounds by November 15, 1992

New Jersey is required by the Amendments to adopt volatile organic compound regulations for which EPA has published or will publish a control techniques guideline (CTG). In addition, these same areas must also adopt regulations which require reasonably available control technology or RACT for major sources of VOCs not covered by a CTG.

Reasonably Available Control Technology Rules for Oxides of Nitrogen by November 15, 1992

The Amendments require that major sources of oxides of nitrogen or NOx be treated in the same manner as major VOC sources. This requires states to adopt RACT regulations for sources of NOx.

New Source Review Regulations for Volatile Organic Compounds, Oxides of Nitrogen and Carbon Monoxide by November 15, 1992

The Amendments spell out specific definitions of what constitutes a major source of VOCs, NOx and carbon monoxide and the offset ratio which a new or modified source in a nonattainment area must achieve. New Jersey also will need to continue to correct deficiencies in its operating regulations including its regulations for review of new sources which currently allow postponement of offsets for resource recovery plants. Such variances will not be permissible under the State's rules after November this year.

Oxygenated Fuels for Carbon Monoxide Control by November 15, 1992

Oxygenated fuels are required to be sold in the New Jersey portions of the New York and Philadelphia Consolidated Metropolitan Statistical Areas during the portion of the year when violations of the carbon monoxide standard occur. For the northern part of the State this is October 1 through April 30 and for the southern part of the State this is November 1 through February 28. The fuel sold during these seasons beginning this year is to contain 2.7 percent oxygen which results in approximately a 20 percent decrease in carbon monoxide emissions.

Criteria and Procedures for Determining Conformity Between the State Implementation Plan and Transportation Plans by November 15, 1992

The State must submit a revision to its implementation plan that commits to a second revision which will include criteria and procedures for assessing conformity according to final regulations promulgated by EPA and the US Department of Transportation (US DOT). In order for a transportation program to be found to conform it must result in a reduction in emissions. The exact amount of the reduction will be determined once the State sets its "emission budget" which is due in 1994.

Stage II Vapor Controls at Service Stations by November 15, 1992

Stage II vapor controls are required at service stations to control emissions during refueling. New Jersey has had these controls in place for since January 1988.

Employer Trip Reduction Programs by November 15, 1992

These programs are required for employers of 100 or more in the New Jersey portions of both the New York and Philadelphia Consolidated Metropolitan Statistical Areas. They are to be designed to result in a 25 percent increase above an area's average vehicle occupancy for all commuting trips which end at the workplace between 6:00 and 10:00 a.m. The employers are to submit their plans to the State by November 1994 and demonstrate compliance with the program by November 1996.

Transportation Control Measures for Offsetting Growth in Emissions from Growth in Vehicle Miles Travelled by November 15, 1992

Even though vehicles continue to be manufactured to meet more stringent emission standards and the fleet continues to be made up of a higher percentage of these cleaner vehicles, the growth in vehicle miles travelled will eventually cause total emissions to increase. The purpose of these transportation control measures is to hold the emissions at their lowest point, and; therefore, offset any growth in emissions due to continued increases in vehicle miles travelled. It is estimated that emissions will begin to increase in the late 1990s.

Discussion of Specific Activities to Ensure Soundness

Prepare Comprehensive Emission Inventories for Volatile Organic Compounds and Oxides of Nitrogen by November 15, 1992

The Amendments establish emission inventory requirements that are designed to account for the effect of all sources of VOCs and NOx which are both ozone precursors and to track the states' progress, or lack thereof, in reducing emissions from sources of these compounds.

Build up of State Staff to Develop and Implement the State Program

Our experiences with past deadlines is that states have waited until the last minute to assemble planning staff, obtain legal authority, develop implementing regulations and to obtain the resources necessary to administer the program. The State of Virginia has shown leadership in this area by authorizing a 50 percent increase in its air pollution control staff just a few weeks ago. EPA has provided enhanced funding to support states new planning and implementation needs. States also need to provide increased contributions. Early implementation of the permit program can provide a source new funds.

Sanctions

The new law provides for the imposition of sanctions for failure to plan and for failure to implement. Sanctions are mandatory and the first available sanction takes affect 18 months after EPA makes a finding that a state has failed to meet a deadline or milestone and the second available sanction takes affect 24 months after the finding. The two available sanctions are an increase in the offset ratio for new sources to 2 to 1 and a cut off of highway funds.

Long Term Planning to Achieve Standards

Under the Amendments, a severe ozone area is required to achieve a minimum reduction of 15 percent in emissions of ozone forming VOCs in the first six years after enactment and three percent per year thereafter. Failing to achieve this goal leads to the imposition of contingency measures, which are to go into effect with no further action by the State or EPA and provide sufficient emission reductions to make up for the shortfall.

Notwithstanding this requirement, a state must achieve compliance with the standard in a severe II area in 17 years. In meeting the minimum requirement, the state would achieve a 48 percent reduction in 17 years. However, if the air quality levels in the state dictated a need for a 50, 60 or 70 percent reduction in emissions, the state would be sanctioned for only achieving 48 percent under the minimum program. Therefore, such a state would need to plan for implementation of greater emissions reductions at a faster rate than the minimum. This would necessitate the state implementing additional optional strategies which would be sufficient to result in the needed emission reductions. The plan which demonstrates the amount of control necessary to attain the standard by the deadline and the schedule for meeting the interim emission reduction goals is required to be submitted in November of 1994.

One measure that offers great opportunities for cost effective emissions reductions is the automobile inspection and maintenance (I/M) program. The "high-tech" system would allow testing to be performed only once every two years. Should a state choose to have a partially decentralized system EPA would be willing to accept a system that includes test-only private inspection centers combined with centralized lanes. It is possible that EPA may draw the bright line defining enhanced I/M at some point below the maximum level of emission reductions achievable by a "high-tech" system. For those places that need emission reductions of more than 48 percent in 17 years, this measure

offers the most reliable and cost effective means of achieving needed reductions. Therefore, EPA would urge the State of New Jersey to implement an I/M program that provides the highest level of emissions reductions possible.

Another measure which will provide cost effective and timely emission reductions is reformulated gasoline. The sale of this fuel is specifically required by the Amendments in the New Jersey portions of the New York and Philadelphia Consolidated Metropolitan Statistical Areas. The Department of Environmental Protection and Energy has already moved to opt the remaining three counties in the State into this program, which begins in January of 1995. Reformulated gasoline will provide a 15 percent reduction in VOC emissions. In addition to the reductions in VOC emissions reformulated gasoline also provides reductions in emissions of toxic pollutants such as benzene. The sale of this fuel is expected to result in a price increase on the order of five cents per gallon.

The Need For Early Strategy Development

The Clean Air Act requires expeditious adoption of measures and strategies to reduce emissions and attain healthful air quality. New Jersey will be highly dependant on the actions of upwind states to reduce their emissions in order to provide for attainment of ozone standards in New Jersey. New Jersey in turn will have to control emissions beyond those needed for attainment in New Jersey in order to provide attainment of ozone standard in states downwind of New Jersey. Recognizing this interdependence between the states in the northeast in fashioning solutions to their ozone problems, the Congress called for the formation of a Northeast Ozone Transport Commission for the purpose of undertaking cooperative and mutual strategies to provide for attainment of the national ambient air quality standards for ozone. Since mobile sources represent a major fraction of controllable VOC emissions, they need to be a major target for future emissions reductions.

If New Jersey is to achieve 60 percent or 70 percent or more reduction in ozone precursors it must implement reduction measures over and above those ^{outlined} ~~contained~~ in the mandatory state measures or the national and regional federal measures. That is why EPA strongly urges New Jersey to implement the best "high-tech" I/M program possible since we can demonstrate its cost effectiveness. We recognize that New Jersey will need many additional measures to attain the necessary reduction - and will need to start as early as possible, even now, to develop these alternatives. The Northeast Ozone Transport Commission has begun this process. We urge New Jersey's active participation in the work of the Commission and its expeditious development of required control strategies.

Thank you for giving us the opportunity to present EPA's views and I will now answer any questions which you may have.

Complying With the Federal Clean Air Act Amendments of 1990

Joint Legislative Committees on the Environment
Hearing
April 2, 1992



New Jersey Department of Environmental Protection and Energy
Scott A. Weiner, Commissioner

Outline of The Federal Clean Air Act

Title 1

- ☐ Sets requirements for meeting health standards for ozone and carbon monoxide.
- ☐ Defines national strategy for decreasing levels of ozone, carbon monoxide and other air pollutants.
- ☐ Defines how the air quality of an area is determined.
- ☐ Establishes penalties for states that do not comply with the act's requirements.

Title 2

- ☐ Sets standards for emissions for automobiles, trucks and buses and requires that they use cleaner fuels.

Title 3

- ☐ Sets smokestack emission limits for 189 other hazardous air pollutants that affect the public's health.

Title 4

- ☐ Sets emission limits of sulfur dioxide and nitrogen oxides from electric utilities to reduce acid rain.

Title 5

- ☐ Establishes a new permitting program for factories and other stationary sources to ensure that all requirements of other titles are met.
- ☐ Establishes a small business assistance program to provide technical support and assistance in complying with the Clean Air Act.

Title 6

- ☐ Phases out chlorofluorocarbons and other substances that deplete the earth's protective layer of stratospheric ozone.

Scope of the Ozone Problem in NJ

Volatile Organic Compounds (VOCs) + Nitrogen Oxides (NOx) + Sunlight = Ozone

Immediate Health Effects*

- Coughing
- Painful breathing
- Loss of certain lung functions
- Respiratory tract & eye irritation

Long-Term Health Effects*

- Respiratory illness
- Asthma attacks

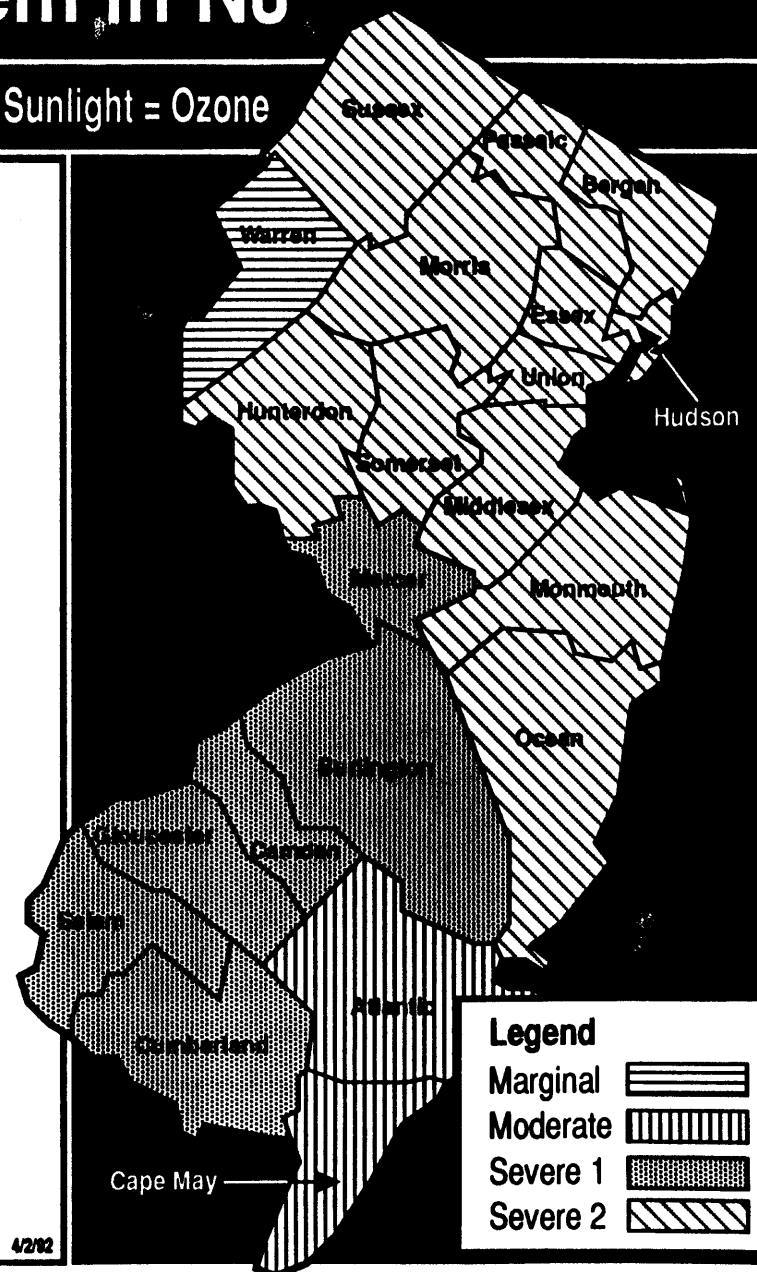
Agricultural Effects

- Decreases crop yields

Other Effects

- Erodes synthetic materials

**These health problems particularly affect young children, athletes, people who work outdoors, asthmatics and the elderly.*

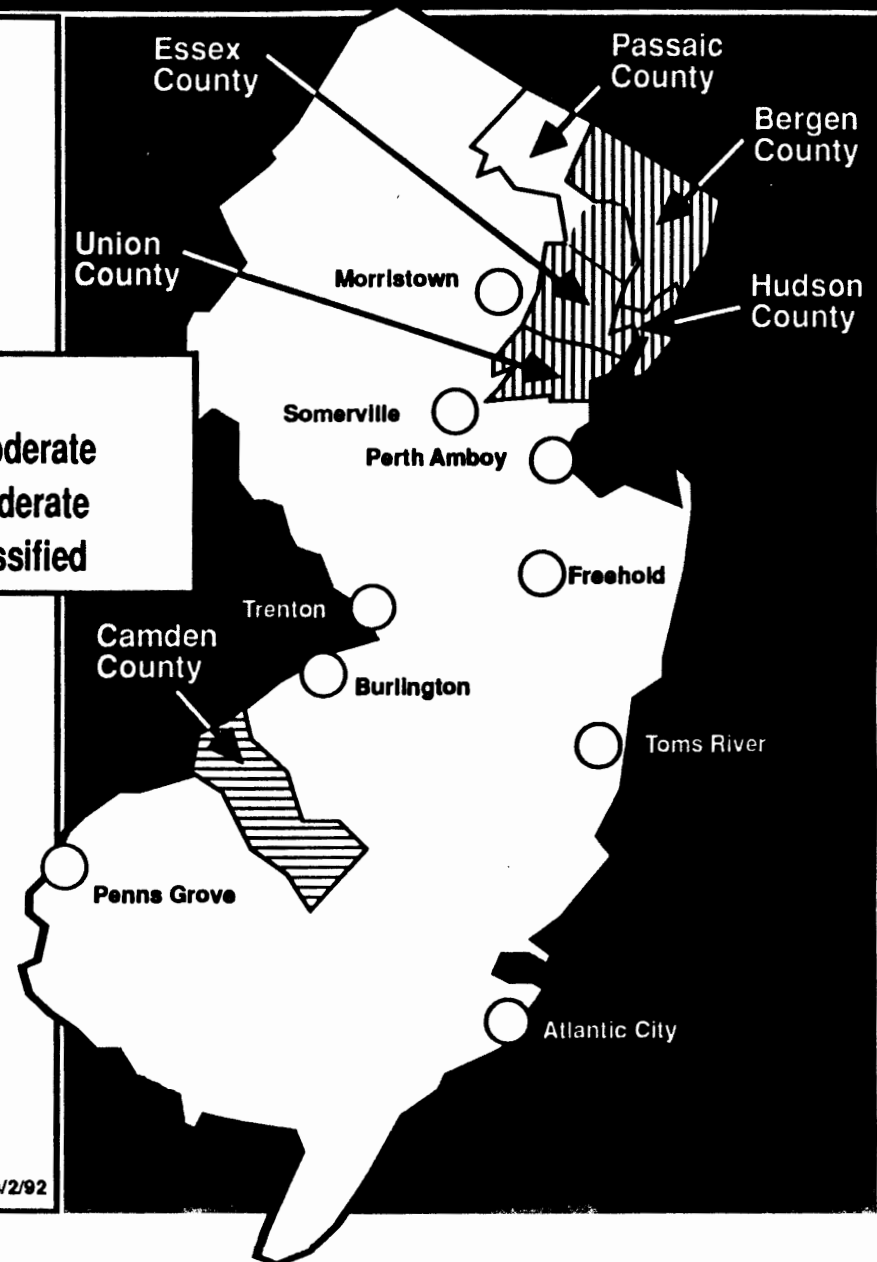
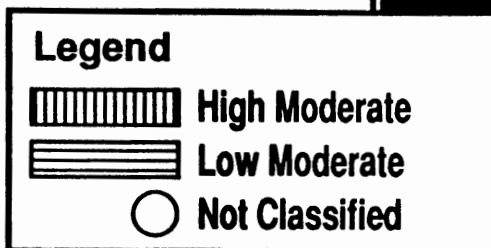


4/2/92

Scope of the Carbon Monoxide Problem in NJ

Health Effects

- Headaches
- Mental dullness
- Dizziness
- Weakness
- Nausea
- Vomiting
- Loss of muscular control
- Irregular pulse
- Irregular respiratory rates
- Collapse
- Unconsciousness
- Cardiac stress
- Unknown



4/2/92

Complying with Title 1 of the Clean Air Act

☐ The Problem

How to reduce levels of ozone and carbon monoxide to comply with the Clean Air Act

•Ozone (summer problem)

- The major components of ozone are volatile organic compounds (VOCs) and nitrogen oxides (NOx). In the presence of sunlight, they create ozone. Naturally occurring sources, including certain plants and animals, produce approximately 30% of all ozone. Among controllable sources, motor vehicle exhaust accounts for about half of the problem. Stationary sources, such as factories, account for 40% of the problem. Off-highway sources, such as lawnmowers and farm equipment, account for 10% of the problem.

- All of NJ is out of compliance with federal standards for ozone

- 18 counties have severe problems

- Only the Los Angeles area has a worse problem

- All of NJ must comply by 2007

•Carbon monoxide (winter problem)

- Motor vehicle exhaust accounts for nearly 91% of the carbon monoxide problem

- Stationary sources such as factories account for another 9% of the problem

- Parts of NJ are out of compliance with federal standards

- NJ must comply by Jan. 1, 1995

☐ Where We Are Now

•Ozone

1990 estimated VOC emission levels: 1,563 tons/day

•Carbon monoxide

1990 estimated emission levels: 4,414 tons/day

☐ What We Are Mandated to Do to Comply with Federal Ozone Standards

- Reduce VOC emission levels at least 565 tons/day by 2005 — a 42% reduction

- NOx reductions can be credited toward VOC reductions

(1.5 tons/day NOx reduction = 1 ton/day VOC reduction; according to EPA estimates)

- Mandated steps will reduce VOC emissions by 382 tons/day, leaving a shortfall of 183 tons/day

- Optional steps must be taken to reduce ozone by at least 183 tons/day, bringing NJ into compliance

☐ What We Must Do to Comply with Carbon Monoxide Standards

- Require use of oxygenated fuels

- Require stricter motor vehicle inspection and maintenance program

- Reduce number of vehicles on highways and improve traffic control

- By January 1, 1995, these steps will bring NJ into compliance

☐ What the Deadlines Are For Meeting Ozone Standards

1996 Reduce VOC emission levels by 15% through mandated and optional steps

1996 - 2005 Reduce VOC emission levels by an additional 3% per year

2005 Achieve a total of a 42% reduction in ozone levels in six southern counties

Complying with Title 1 of the Clean Air Act (continued)

2007 Achieve a total of a 48% reduction in ozone levels in 12 northern counties

□ How We Get There

November 1992

- Submit State Implementation Plan (SIP) to EPA
Federally approved, legally enforceable document, including
 - 1990 emissions inventory
 - Role of public participation in developing the plan
 - Rules to implement the Clean Air Act mandates
 - Identification of needed legislation and regulations to meet federally mandated steps, such as
 - stricter motor vehicle inspection program
 - employee trip reductions
 - air pollution controls on additional facilities
 - Adoption of NJ Department of Transportation plans to offset the projected increase of emissions from vehicle miles travelled, and implement transportation projects to reduce emissions
 - A separate SIP to meet the carbon monoxide health standard, including a rule requiring the use of oxygenated gasoline in winter

November 1993

- Submit SIP amendments to EPA that include
- A plan to reduce VOC emissions by 15% by 1996

November 1994

- Submit SIP amendments to EPA that include
- A plan to reduce annually by 3% VOC and/or NOx emissions through 2007
 - A computer modeling demonstration that indicates the percentage reduction needed of VOCs and/or NOx to a total of 48% to meet the ozone health standard by 2007
 - A rule describing the clean fleet vehicle program
 - A list of contingency rules which will automatically kick in if the state fails to meet an emission reduction milestone

Steps Already Taken

While previously taken steps have reduced the amount of VOCs, the law does not allow credit for VOC reductions resulting from actions taken prior to the Clean Air Act enactment on November 15, 1990.

	<u>Tons Reduced Per Day</u>	
	<u>Volatile Organic Compounds (VOCs)</u>	<u>Nitrogen Oxides (NOx)</u>
Vapor Recovery ☐ Requires commercial gas stations to use special nozzles to keep gas vapors out of the air	30	0
Marine Barge Loading Vapor Recovery ☐ Requires marine barge terminals to collect all gas vapors during transfers of gasoline	22	0
Reasonably Available Control Technologies (RACT) ☐ Strengthens existing regulations which require factories and other stationary sources to control emissions to meet minimum EPA requirements	6	0
Total	58	

Federally Mandated Steps

What We Must Do to Comply

Reduce 1990 VOC emission levels by 565 tons/day by 2005

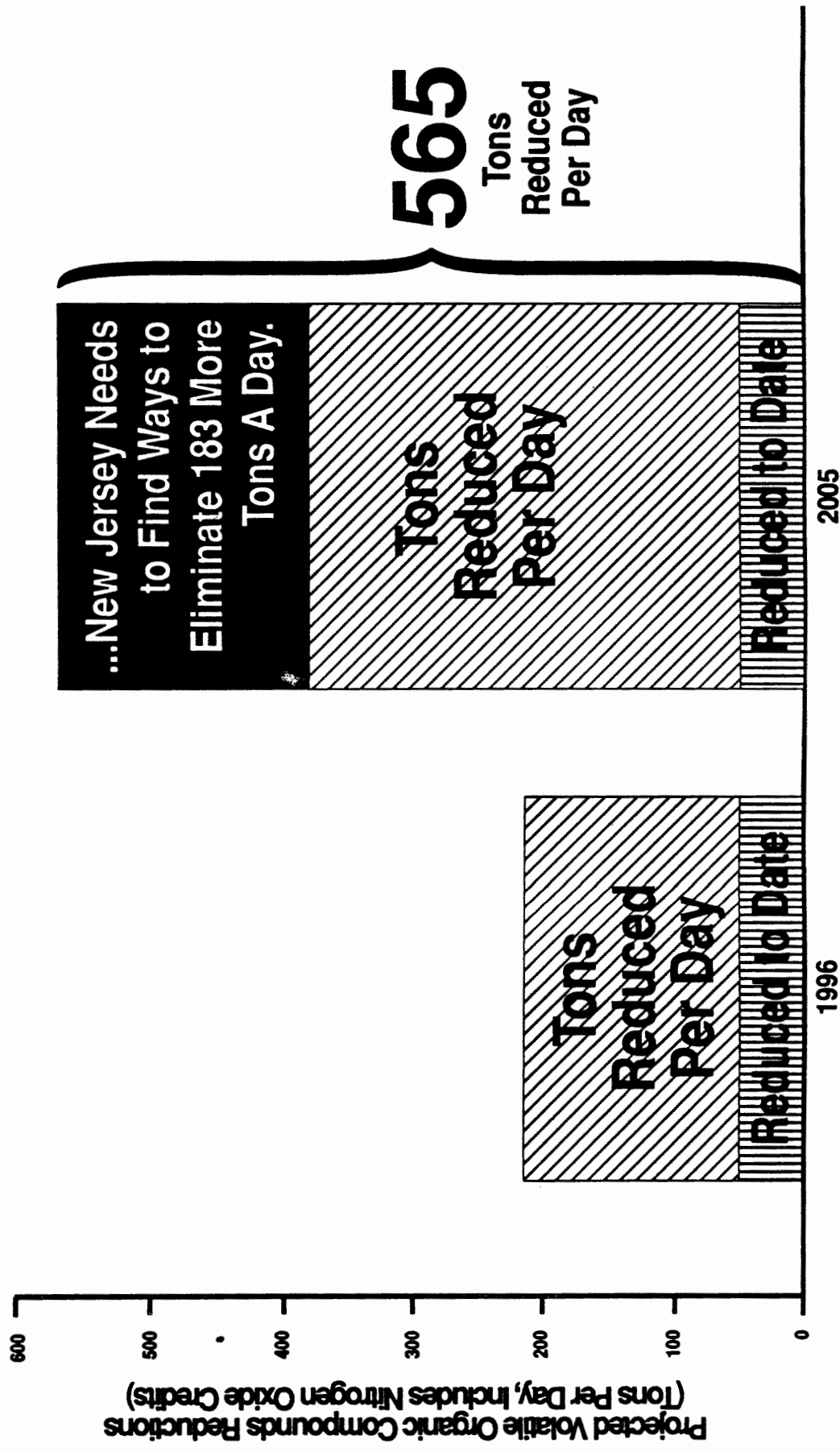
How Mandates Will Help Us Comply

Mandates will reduce emissions by 382 tons/day, leaving a shortfall of 183 tons/day

	<u>Tons Reduced Per Day</u>		
	Volatile Organic Compounds (VOCs)	Nitrogen Oxides (NOx)	Cost /Ton
Cleaner Cars and Fuels			
☐ Use cleaner cars that meet federal standards	12	42	\$1,000
☐ Use cleaner, federal reformulated gasoline to reduce the amount of gas vapors entering the air by 15% by 1995, and an additional 10% by 2000	48 10		400
☐ Require stricter motor vehicle inspections	74		400
Additional RACT measures, including:	74	140	5,000
☐ Reduce emissions from utility stacks			
☐ Reduce emissions from EPA-designated sources emitting more than 25 tons/year, such as petrochemical industries, wastewater treatment plants and equipment cleaning sites			
☐ Reduce emissions during transfers of solvents			
Employer Trip Reduction	15	20	14,000
☐ Require employers of 100 or more people to reduce the number of employees commuting alone by car			
Transportation Control Measures, including	8	3	20,000
☐ Use highway lanes reserved for vehicles with two or more passengers; improved public transit; one way tolls and electronic traffic control systems to reduce the number of vehicles on the road and to improve the flow of traffic.			
Clean Fuel Fleets	2	3	9,000
☐ Require places of business with more than 10 vehicles to use clean fuels and meet stricter emission standards.			
Total	243	208	

The remaining 183 tons/day of emissions must be reduced through optional steps.

After Implementing All Mandated Steps, New Jersey Still Won't Meet Federal Clean Air Act Standards...



Proposed Options to Close the Gap

Why Options?

To close the gap left after taking federally mandated steps.
Options must reduce emissions by 183 tons/day

	<u>Tons Reduced Per Day</u>		<u>Cost/Ton</u>
	<u>Volatile Organic Compounds (VOCs)</u>	<u>Nitrogen Oxides (NOx)</u>	
Low Emission Vehicles/Cars	25 (40)	12	\$1,700
☐ Use cars that are cleaner than those that meet federal standards			
Further Industrial Controls			10,000
☐ More stringent control of utility boiler emission		63	
☐ Reformulation of consumer products, such as deodorants, paints, nail polish	20		
☐ Control of wastewater treatment operations	50		
Vehicle Scrappage Program	12 (1)	9 (1)	5,000
☐ Allow companies to purchase pre-model year 1981 vehicles to offset their emission reductions			
☐ Establish program for state and private sector to purchase these old vehicles			
Energy Conservation Measures	1	25	
☐ Implement all recommendations of NJ's Energy Master Plan, including retrofitting lighting fixtures, upgrading appliance efficiency and utility conservation programs			
Total	108	109	

Further Reductions Needed: 2 Tons/Day

Other Options to Close the Gap

	<u>Tons Reduced Per Day</u>		<u>Cost/Ton</u>
	<u>Volatile Organic Compounds (VOCs)</u>	<u>Nitrogen Oxides (NOx)</u>	
Stricter High-Tech Car Inspection and Maintenance	6	31	\$5,000
☐ Require stricter motor vehicle inspections, stricter warranties			
Low Emission Vehicles/Trucks			
☐ Expand use of non-federal low emission vehicle program to include trucks	20	43	2,000
☐ Require use of California reformulated gasoline	16		2,000
Off Highway Program			
☐ Restrict use of vehicles and/or require use of catalytic converters and/or cleaner fuels in engines including those in:	42 (69)	32 (51)	10,000
lawn & garden equipment	(2-3)	0	
recreational vehicles (such as motor boats)	(7-11)	0	
construction equipment (such as air compressors)	(1)	0	
agriculture equipment (such as tractors)	(1-2)	0	
industrial equipment (such as fork lifts)	(25-42)	(9-15)	
aircraft, railroad, commercial vessels	(6-10)	(23-36)	
Further Transportation Control Measures	12	14	50,000
☐ HOV lanes; electronic traffic control systems			
Expanded Vapor Recovery	4	0	10,000
☐ Expand use of special nozzles to keep gas vapors out of the air			
Further, More Stringent Industrial Controls			
☐ At landfills and hazardous treatment facilities	2	0	10,000
☐ For the production and use of asphalt pavement	6	0	10,000
☐ 50% additional reductions for top 25 VOC emitters, such as petrochemical refineries and electric utilities	58	0	50,000
Expanded Employer Trip Reduction	9	11	20,000
☐ Require employers of 50 or more people to reduce the number of employees commuting alone by car.			
Regulate Very Small Individual Sources	5	<1	40,000
☐ Dry cleaners, small bakeries, small auto body shops			
Impose 50% Control on Asphalt Roofing Activities	32	0	10,000
Lifestyle Strategies	10	12	500
☐ Prohibit students from driving to school			
☐ Prohibit use of motor boats on hot summer days			
☐ Prohibit barbecues			
☐ Restrict house painting in the summer			
☐ Designate alternate driving days			
☐ Close drive-thrus at sites including banks, fast food establishments, dry cleaners and liquor stores			
Pricing Strategies	15	17	50,000
☐ Triple tolls to reduce driving			
☐ Impose parking fees at work, malls, etc.			
☐ Impose gas tax \$1/gallon			

TESTIMONY

by

New Jersey Department of Transportation

before the JOINT

SENATE ENVIRONMENT COMMITTEE AND
ASSEMBLY ENVIRONMENTAL QUALITY COMMITTEE

April 2, 1992

on the

CLEAN AIR ACT AMENDMENTS OF 1990

Good morning, I am Christine Johnson, Assistant Commissioner of the New Jersey Department of Transportation. I appreciate the opportunity to be here today to speak with you on the Clean Air Act Amendments of 1990 and what we must do to comply. I will also briefly discuss what sanctions may be imposed on the State of New Jersey if we are found to be in non-compliance.

In past testimony you have heard that Transportation Control Measures are not as effective as "tail pipe" strategies in reducing air pollution. Having said that, you may ask "Why are we doing this"? I hope to be able to answer that basic question for you today. We are pursuing Transportation Control Measures (TCMs) for several reasons.

- o TCMs are good transportation policy.
- o The Clean Air Act Amendments of 1990 require us to:
 - (1) reduce the emissions from growth in vehicle miles travelled (VMT);

(2) enact a legally enforceable mechanism requiring employers to implement an employer trip reduction program (ETR) reducing commutation trips during peak hours; and

(3) subjects our capital program to tests which ensure that it improves our air quality, potentially jeopardizing our entire capital program.

- o If we do not comply with the Clean Air Act, the Department runs a dual risk of being sanctioned and being sued, either of which could shut down our capital program.

In the 1980's, New Jersey experienced unprecedented growth in the economy, population, and the labor force. New Jersey continues to be:

- o the most densely populated state,
- o the most suburbanized state, and has
- o the most heavily travelled roads in the nation.

As a result, we have the distinction of being the most congested state in the nation.

When the Transportation Executive Council reported to Governor Florio in the fall of 1990, the Council recognized congestion as a key quality of life issue and a key barrier to new economic development for the state. But the Council said we couldn't solve our congestion problems the way we had in the past decades -- by laying more asphalt -- for many reasons.

- o clean air concerns
- o wetlands
- o community impact concerns
- o historic sites
- o expense
- o length of time to complete a project
- o lack of available land

We announced a new policy of moving more people, not more vehicles and we called for the implementation of several strategies to stretch the capacity of our roads.

- o Incident Management
- o Intersection Improvements
- o Computerized Signals
- o Automatic Toll Collection
- o Special Rush Hour Lanes
- o Smart Highways
- o Reversible Lanes

Then in November 1990, the Congress passed a revolutionary set of amendments to the Clean Air Act that made this recommendation a federal requirement. Unlike the previous Clean Air Act, the amendments specifically addressed America's love affair with the automobile and set a standard for controlling the amount of emissions specifically coming from vehicles by requiring a cap, in essence, in the emissions resulting from the growth in vehicle miles travelled (VMT).

Our normal increase in VMT is 1.1% per year. Using this rate of growth, we can anticipate an increase of 30 million VMT between 1990 and 2005. In essence, we need to either reduce or prevent this VMT growth or mitigate the emissions impact from this growth.

Overall, DEPE has to reduce VOC's (Volatile Organic Compounds) by 15% over 1990 levels by 1996, and then 3% per year thereafter through the year 2007 (See chart).

We believe much of the transportation emission reduction that will occur in the next several years will be from transportation emissions technology, i.e. the California Car, alternate fuels, enhanced inspection and maintenance. However, DEPE anticipates that the growth of VMT will outstrip technology improvement emissions by the end of the decade. At that point, we will have to move our emphasis from tailpipe control to shifting modes or to operational improvements that will speed up traffic flow. If DOT is to be prepared to bear this burden, we must begin now.

Indeed, the Clean Air Act Amendments require that we consider 16 Transportation Control Measures, or TCMs, such as:

- o programs to improve public transit systems;
- o fringe and corridor parking for transit and non-SOVs;
- o promotion of flextime;
- o development of HOVs and shared ride services;
- o programs to improve bicycle storage, lanes, and safety;

- o programs to get old cars off the road; and
- o traffic flow improvements to reduce emissions.

(See attached chart)

We have set up a structure to define and establish an implementation program for these measures called the "Statewide Transportation Air Quality Planning Organization" (STAQPO) to investigate and recommend broad or generic TCMs which would contribute towards attainment. The STAQPO consists of 49 members representing 5 MPOs, 7 state agencies and authorities, 29 local government representatives, 4 private sector representatives, and 4 private/non-profit planning representatives. The kickoff meeting was held on February 25, 1992. The STAQPO sends its recommendation to three Regional Transportation Air Quality Planning Organizations: the Northeast, Central/Southwest, and Southeast regions. The Department feels each region is unique and that they should have the responsibility to develop their own TCMs. The kickoff meetings for the regional organization were March 23, 1992 for the Northeast, March 26, 1992 for the Central/Southwest. The Southeast regional meeting will be held tomorrow, on April 3.

In addition to complying with the VMT requirements and the TCM measures, the Clean Air Act Amendments of 1990 went even further. They specifically require New Jersey to include in its 1992 revised SIP, a legally enforceable mechanism to implement the employer trip reduction provisions.

Federal law requires that every employer of 100 or more employees increase the average number of people in each vehicle commuting to

work by 25% over the areawide average by November 15, 1996. By November 15, 1992, States must submit a revised State Implementation Plan (SIP) that identifies the State's legally enforceable mechanism for implementing the Employer Trip Reduction (ETR) requirements.

The Employer Trip Reduction program cannot be a "voluntary" program - something that is nice for the State to do. It is a federal mandate; the State must be able to "legally enforce" this program; and if we do not, we face severe penalties. S-35, the "New Jersey Traffic Congestion and Air Pollution Control Act" sponsored by Senator Rand. has become the vehicle for New Jersey to fulfill the federal ETR mandates of the Clean Air Act.

However, if the Legislature does not act on a timely basis, the Department of Environmental Protection and Energy will be forced to pursue implementation through other means.

We expect that the employer trip reduction provisions will achieve most of the necessary emissions reductions necessary to offset the emissions which result from the growth of VMT. (See shaded area of chart.)

The Clean Air Act Amendments went even further. They require each State's capital program to contribute to cleaner air. This means that the entire FY93 capital program will be tested for TIP/SIP conformity. In other words, our capital program -- whether it includes an intersection improvement, a road widening, or a new

alignment -- will be submitted to a test to determine whether or not it contributes to cleaning up our air, or whether it makes our air dirtier. If we cannot show that our capital program will improve our air quality, our capital program will be shut down in November.

Not only is the capital program threatened by sanctions, but also by lawsuits. If we do not comply with the provisions of the Clean Air Act, DOT particularly faces mandatory sanctions in the form of significantly reduced transportation dollars. We could lose all federal highway construction dollars, except those provided for safety projects. If the sanctions were in place this year, it could mean the loss of as much as \$414 million.

The only Federal Highway Administration programs which could be funded would be those under the Congestion Mitigation and Air Quality program in the amount of \$48 million and Metropolitan planning in the amount of \$4 million.

Unlike the earlier, more liberal Amendments, which allowed for sanctions only when a State failed to submit an acceptable SIP, the new Amendments allow for sanctions if a State fails to comply with any individual SIP requirement, or if any TCM included in the SIP is not implemented.

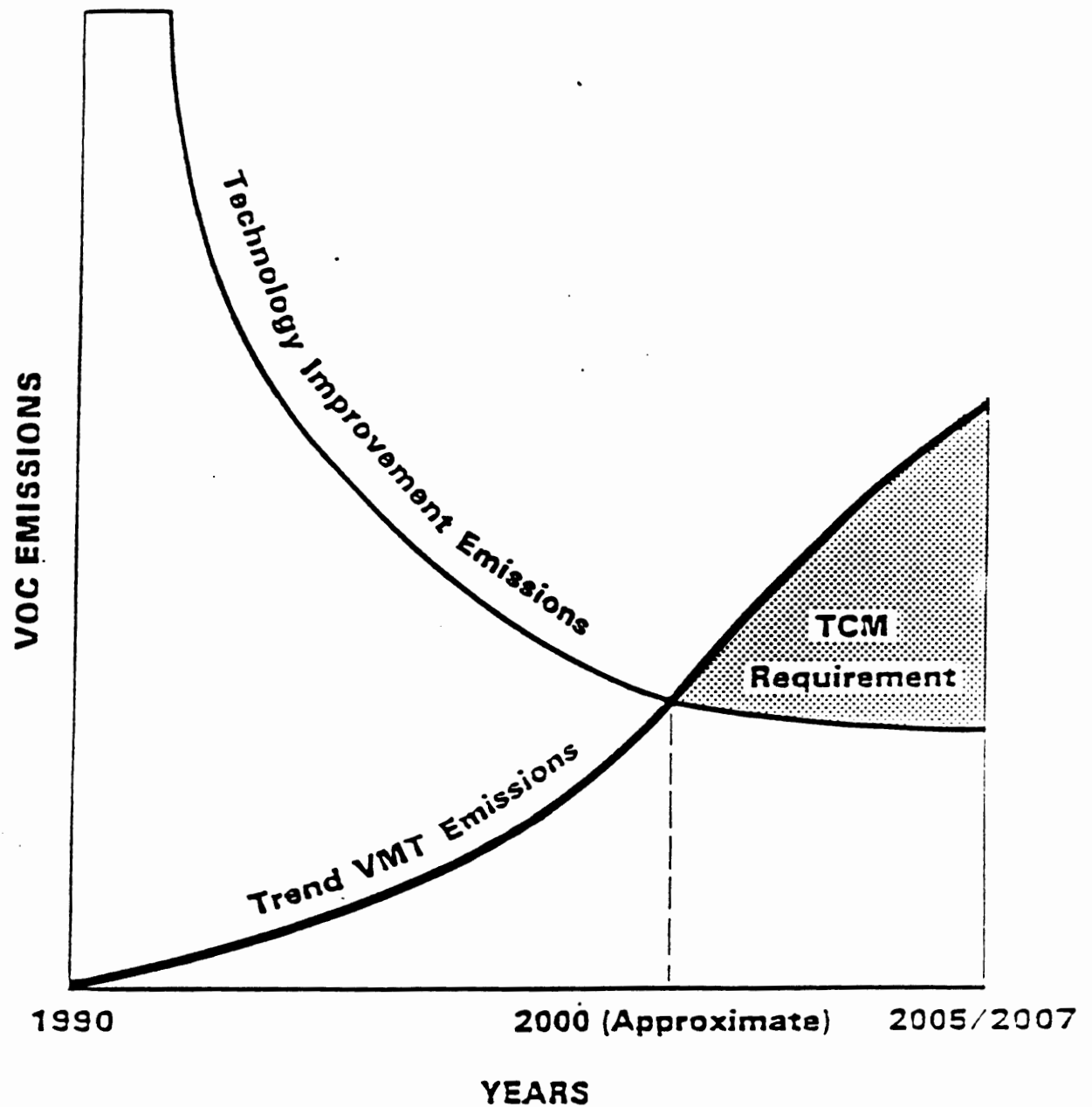
In addition, DOT faces the threat of lawsuits beginning as early as this November, not in the year 2005. The 1990 Clean Air Act Amendments, unlike previous law, authorize private citizens or groups to sue any agency that is not implementing all of the provisions of

the Clean Air Act Amendments. There is potential for a lawsuit against our capital program, and, we will have to prove that we are reducing emissions from VMT, that we are implementing the employer trip reduction requirements, and that we have sufficient transportation control measures in place.

The Department of Transportation, perhaps more than any other entity, faces enormous risk. I hope we can count on your support and the support of your fellow legislative colleagues to help us fulfill the mandates imposed upon us by the Clean Air Act, so that the 1.4 billion dollar capital program we have proposed can begin to put New Jersey to work.

TEST3-DISK-PKS#12

EMISSIONS: VMT GROWTH VS. TECHNOLOGY IMPROVEMENTS



EXAMPLES OF TRANSPORTATION CONTROL MEASURES (TCM)

- I. Trip Reduction Ordinances
 - 1. Special Use Permits
 - 2. Negotiated Agreements
 - 3. Trip Reduction Goals
 - 4. Mandated Ridesharing Programs
 - 5. Transportation Management Funds and Districts

- II. Driving Restrictions
 - A. Voluntary No-Drive Days
 - B. Route Diversion
 - 1. Auto Restricted Zones
 - 2. Pedestrian Malls
 - 3. Residential Traffic Controls
 - C. Control of Truck Movements
 - 1. Designated Truck Routes
 - 2. Scheduling of Truck Operations

- III. Employer-Based Transportation Management
 - A. Employee Financial Incentives
 - 1. Charge for Drive-Alone Parking
 - 2. Subsidize Transit Use
 - 3. Eliminate Employee Parking Subsidies
 - B. On-site Employer Transportation Coordinator
 - C. Transit/Rideshare Services
 - 1. Provide HOV Shuttle Services Between Company Facilities
 - 2. Centralized Vanpool/Carpool Matching Service
 - 3. Rideshare/Transit Marketing/Information Programs
 - 4. Designated Transportation Coordinator
 - 5. HOV Priority Parking
 - 6. Vanpool/Subscription Bus Financing
 - D. Increase Use of Workplace-Based Telecommunications Systems

IV. Improved Public Transit

A. Transit Operations

1. Bus Route and Schedule Modifications
2. Express Bus Service
3. Fixed Guideway Transit
4. Bus Traffic Signal Preemption
5. Bus Terminals and Shelters
6. Simplified Fare Collection
7. Improved Transfers
8. Schedule Coordination
9. Circumferential and Suburban Bus Service

B. Transit Management

1. Marketing Programs
2. Maintenance Improvements
3. Vehicle Fleet Improvements
4. Operations Monitoring Programs

C. Fare Policy

1. Peak/Off-Peak Transit Fares
2. Simplified Fare Collection Procedures
3. Reduced Fares
4. Monthly Passes
5. Uniticket Programs

V. Parking Management Programs

A. Off-Street Parking Restrictions

1. HOV Preferential Parking
2. Parking Rate Changes
3. Reserve Fixed Percentage of Spaces for HOV's

B. Control of Parking Supply

1. Prohibit Construction of New Parking Facilities in Areas Served by Mass Transit
2. Limit Number of On- and Off-Street Parking Spaces in Designated Areas
3. Use of Zoning and Parking Regulations to Limit Capacity

C. On-Street Parking Controls

1. Curb Parking Restrictions
2. Residential Parking Controls
3. Peak Hour Parking Ban and Enforcement
4. Reduced Legal Parking Spaces in High Congestion Areas
5. Increase Meter Fees
6. Increased Enforcement and Towing

D. Commercial Vehicles

1. On-Street Loading Zones
2. Off-Street Loading Areas
3. Peak Hour On-Street Loading Prohibition

VI. Park and Ride/Fringe Parking

1. Priority Parking for HOV's at Major Parking Facilities
2. Parking at all Major Transit Stations
3. Strategic Location of Fringe Parking to Serve Major Highway Facilities/Interchanges
4. Construct New/Enlarged Park and Ride and Fringe Parking Facilities
5. Use Theater, Shopping Center, Church, Stadium Parking Facilities for Fringe Parking, as Available
6. Coordinate Transit/Shuttle Services to Park and Ride/Fringe Parking
7. Remote Parking Lots Adjacent to the CBD with Transit Shuttle Service

VII. Work Schedule Changes

1. Staggered Work Hours
2. Flex Time
3. 4-Day Work Week; 5/4 Plans
4. Increase Use of Home-Based Telecommunications Systems

VIII. Road Pricing

A. Tolls

1. Peak-Hour Tolls
2. Reduced Tolls for HOV's
3. Use of AVI Technologies

B. Taxes/Fees

1. Increase Gasoline Tax
2. Increase Auto Registration Fees
3. State "Gas Guzzler" Tax
4. Reduced HOV Auto Insurance Rates
5. Gasoline Tax Rebates for HOV's

C. Areawide Licensing Schemes

IX. Traffic Flow Improvements

A. HOV lanes

1. Exclusive Bus Lane - Arterial
2. Bus-Only Street
3. Contra-Flow Bus Lane
4. Freeway HOV Bypass
5. Exclusive HOV Lane-Highway

B. Freeway Operations

1. New Freeway Lane Using Shoulders or Reduced Lane Widths
2. Freeway Incident Management Systems
3. Freeway Diversion and Advisory Signing
4. Ramp Metering
5. Freeway Surveillance and Control

- C. Traffic Signalization
 - 1. Local Intersection Signal Improvements
 - 2. Interconnected Arterial Signal System
 - 3. Area Signal System
 - 4. Eliminate Unnecessary Signals and Stop Signs
 - D. Traffic Operations
 - 1. Intersection and Roadway Widening
 - 2. One-Way Streets
 - 3. Turn Lane Installation
 - 4. Turning Movement and Lane Use Restrictions
 - 5. Arterial Surveillance and Control
 - 6. Reversible Lane System
 - 7. Strengthen Curb Cut Controls
 - 8. Enforce Traffic Regulations
 - E. Intelligent Vehicle and Highway Systems (IVHS)
-
- X. Areawide Ride Share Incentives
 - A. Areawide Programs
 - 1. Carpool Matching Programs
 - 2. Vanpool Programs
 - 3. Shared Ride Taxi
 - 4. Guaranteed Ride Home
 - B. Transportation Management Organizations
 - C. Tax Incentives
 - 1. Accelerated Depreciation Allowance for Employer-Provided Vanpools
 - 2. State/Local Tax Exemptions for Vanpool or Transit Subsidies
 - 3. State/Local Gas Tax Exemptions for Provision of Vanpool Benefits

TESTIMONY OF BARBARA McCONNELL, COMMISSIONER
DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT
BEFORE THE
SENATE AND ASSEMBLY ENVIRONMENT COMMITTEES
ON THE FEDERAL CLEAN AIR ACT
APRIL 2, 1992

As my fellow commissioners have described, the 1990 amendments to the Clean Air Act will have a far-reaching impact on the State of New Jersey. We are faced with a federal mandate which will profoundly affect both individual citizens and business concerns of our State.

The EPA has estimated that the new requirements will cost the American public and industry \$25 billion annually by the year 2005. However, as we have heard, non-compliance with the Act will also be costly: New Jersey would stand to lose approximately \$414 million in Federal transportation funding for just this year alone.

We in the executive branch and you in the legislature have a formidable task before us. In the administration, the Department of Commerce is working closely with the Departments of Transportation and Environmental Protection and Energy to design the strategies for meeting the goals of the Act. As Commissioner of the Department of Commerce, my role is to ensure that the economic impact of all proposed strategies is fully considered.

There are a few broad considerations which the Department of Commerce is emphasizing. First, we are encouraging a regional approach to achieve the mandated pollutant reductions. This is particularly critical in New Jersey because of our unique status as a "downwind" state. Much of the pollution attributed to New Jersey is not necessarily of our own making.

New Jersey is a member of the Regional Ozone Transport Commission, made up the majority of northeast states, whose purpose is to identify and implement regional solutions to the ozone problem.

The importance of a regional approach fits into the Department of Commerce's second concern: we must not adopt requirements which will place New Jersey at a competitive disadvantage with our neighboring states, particularly during this difficult economic time.

Third, we want to make sure that there is adequate private sector input to the process which establishes our strategies. As we have said, the business community is going to be severely impacted by every requirement of the Clean Air Act. Their participation in the process which determines how we will fulfill these requirements is essential if we are going to successfully meet the Act's mandate.

For example, the Department of Commerce worked closely with DOT, DEPE and Senator Rand in crafting the legislation which addresses the reduction in employee vehicle use component of the Act - better known as the "Ridesharing" bill.

I believe that we now have a bill which meets the Federal mandate, in a manner that places as light a burden as possible on the business community. It limits paper work, rewards existing trip reduction practices, provides for ongoing business participation in the process, includes incentives as well as penalties and does not go beyond the Federal mandate.

The Department of Commerce is also working with DEPE to set up the Small Business Technical and Environmental Assistance Program, mandated by the Act, in our Department.

Our Department is committed to working with the legislature and the business community to develop a workable program to meet all the Clean Air requirements in an economically sound manner. As difficult as this new mandate is, clean air and a healthy economy can be achieved at the same time if we proceed with caution and consideration of all potential impacts.

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HEALTH BULLETIN



CN 360, TRENTON, N.J. 08625-0360

FRANCES J. DUNSTON, M.D., M.P.H., COMMISSIONER

TO: Physicians in New Jersey

FROM: Frances J. Dunston, M.D., M.P.H.
State Commissioner of Health

SUBJECT: **Health Effects From Ambient Ozone Exposure**

DATE: June 1, 1991

Once again this year, I would like to call your attention to a potentially serious public health problem in New Jersey during the summer months involving elevated outdoor levels of ozone, the major component of "smog". Sunlight acts photochemically on industrial and vehicular emissions to form ozone. High ozone levels occur on warm, sunny days typically between 11:00 AM and 7:00 PM. These are also the hours many people spend outdoors.

During the summer, the Department of Environmental Protection and the Department of Health will issue radio bulletins when high ozone levels are forecast or measured. **The New Jersey Department of Health recommends that whenever ozone reaches unhealthful levels, people limit physical activity outdoors, especially during the hours when ozone concentrations are highest.**

Under the federal Clean Air Act, the United States Environmental Protection Agency established a health based ozone standard of 0.12 parts per million averaged over one hour. Typically, some 15 to 25 percent of the days from June through September have an ozone level over the federal health standard. However, in recent years ozone levels have been even higher in New Jersey with over 60 percent of the days in July recording ozone values above the federal standard at one or more monitoring sites in 1988.

A substantial body of medical information links adverse respiratory effects with exposure to ozone. Ozone is a respiratory irritant and increases the occurrence and severity of respiratory disease. Decreases in lung function have been observed in healthy exercising persons who breathe ozone concentrations equal to those measured in New Jersey during the summer. Some studies have indicated a greater rate of emergency room visits, hospital admissions, and physician visits with respiratory problems during and immediately after ozone episodes. These respiratory symptoms include shortness of breath, chest pain, throat irritation, coughing, and wheezing in both adults and children.

Toxicological studies have shown that ozone damages sensitive lung tissue and that clinical effects may continue for days after exposure has ended. Repeated exposures may lead to a loss of pulmonary elasticity and premature aging of the lung. Although the cumulative effects of daily exposures to ozone are unknown, animal experiments suggest that ozone exposure could result in pathophysiological processes leading to chronic lung disease.

Sensitive persons may include the young, the elderly, or those with pre-existing respiratory problems, such as asthma. However, clinical studies indicate that even healthy adults are likely to experience adverse health effects from ozone exposure when performing heavy exercise or manual labor outdoors at times when levels are high, usually in the afternoon.

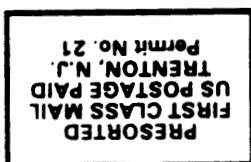
For more detailed health information, you may contact Michael Berry, Environmental Health Service, New Jersey Department of Health at (609) 633-2043.

Information on air quality forecasts or monitoring can be obtained by calling the Division of Environmental Quality, New Jersey Department of Environmental Protection at (800) 782-0160.


Frances J. Dunston, M.D., M.P.H.

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