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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
THE ADMINISTRATOR

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TO: Mark Lang
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FROM: Tom Super
382-4727

COMMENTS:

Number of pages to follow: -8-

Date: 6/6/89

Time: 11am

Office of the Administrator/
Office of Regional Operations
Mail Code: A-101
Room: 1220 West Tower

JUNE 7, 1989

WKR EEI SPEECH

0 WHEN I FIRST ACCEPTED YOUR INVITATION, I EXPECTED TO GIVE YOU THE DETAILS OF THE PRESIDENT'S ACID RAIN PROPOSAL

--SO I WAS PLEASED THAT I WOULD BE SPEAKING TO YOU THROUGH A SATELLITE

--IT'S HARD TO LYNCH SOMEONE IN A SATELLITE

--WITHOUT A PHONE HOOK-UP, YOU CAN'T EVEN ASK ME ANY HARD QUESTIONS

--BUT THE PRESIDENT DECIDED TO ANNOUNCE HIS CLEAN AIR ACT PROPOSAL NEXT WEEK

--THUS I'M IN A BIT OF A BIND

--I AM NOT IN A POSITION TO REVEAL THE DETAILS OF THE PROPOSAL

--AT THE SAME TIME, I KNOW THAT THE PRESIDENT'S ACID RAIN CONTROL PLAN IS THE NUMBER ONE TOPIC ON YOUR MINDS

--SO I'M GOING TO TALK TODAY ABOUT ACID RAIN, WITHOUT GETTING INTO MANY DETAILS

--I WANT YOU TO UNDERSTAND WHAT WE'RE TRYING TO ACCOMPLISH, AND HOW WE'RE TRYING TO ACCOMPLISH IT

--IF YOU UNDERSTAND WHERE WE'RE COMING FROM, MAYBE YOU WILL HELP US BREAK A LONG-STANDING POLITICAL STALEMATE

0 PROBABLY THE MOST IMPORTANT ASPECT OF THE PRESIDENT'S ACID RAIN PROPOSAL IS THE VERY FACT THAT HE'S PUTTING ONE FORWARD AT ALL

--AS YOU KNOW AS WELL AS ANYONE, ACID RAIN HAS BEEN THE MOST CONTENTIOUS ENVIRONMENTAL ISSUE OF THE 1980s

--IT HAS EMBROILED UTILITIES, TROUT FISHERMEN, SCIENTISTS IN SEVERAL COUNTRIES, AND CLEAN AIR ADVOCATES IN A LONG DEBATE OVER ENVIRONMENTAL CAUSE AND EFFECT

--IT HAS EMBROILED UTILITIES, PUBLIC SERVICE COMMISSIONS, AND STATE GOVERNMENTS IN A LONG DEBATE OVER INTERSTATE EQUITY

--AND IT HAS EMBROILED THE U.S. AND CANADIAN GOVERNMENTS IN A LONG DEBATE OVER INTERNATIONAL RESPONSIBILITIES

--YOU HAVE BEEN AT THE CENTER OF ALL THOSE DEBATES

--YOUR INDUSTRY IS A MAJOR CONTRIBUTOR TO ACID RAIN

--AND SO CONTROLS MUST NECESSARILY FALL ON YOU

--NEXT MONDAY THE PRESIDENT WILL INDEED PROPOSE TO CONTROL THE POLLUTANTS THAT CAUSE ACID RAIN

--IN PARTICULAR, HE'S GOING TO PROPOSE SUBSTANTIAL CUTS IN UTILITY EMISSIONS OF SULFUR DIOXIDE

0 IN 1980, WE BEGAN A DECADE-LONG ACID RAIN RESEARCH PROGRAM THAT WILL END UP COSTING ABOUT HALF A <u>BILLION</u> DOLLARS

--THAT RESEARCH HAS BEEN FRUITFUL: WE NOW KNOW MUCH MORE ABOUT THE EFFECTS OF ACID PRECIPITATION ON LAKES AND STREAMS, FORESTS, AGRICULTURAL CROPS, AND BUILDING MATERIALS THAN WE KNEW IN 1980

--AS THE PRESIDENT HAS SAID: "THE TIME FOR STUDY ALONE IS OVER. NOW IS THE TIME FOR ACTION."

--IN EFFECT, THE PRESIDENT IS ATTEMPTING TO BREAK THE DOMESTIC POLITICAL LOGJAM BY PROPOSING THE FIRST PRESIDENTIAL ACID RAIN CONTROL BILL

--IT SHOULD NOT BE OVERLOOKED THAT NO CONGRESS, REPUBLICAN OR DEMOCRAT, HAS EVER PASSED AN ACID RAIN BILL AND PUT IT ON THE PRESIDENT'S DESK

--I BELIEVE THIS CONGRESS WILL DO SO, THANKS LARGELY TO GEORGE BUSH'S INITIATIVE

--LOOKING BACK OVER THE LONG AND CONTENTIOUS DEBATE ABOUT ACID RAIN, I REGRET THE COUNTRY DELAYED MOVING FOR SO MANY YEARS

--A MODEST APPROACH, IF UNDERTAKEN FIVE OR TEN YEARS AGO, WOULD NOW BE ACHIEVING REAL REDUCTIONS IN ACID RAIN

--BUT NOW IS NO TIME FOR A MODEST APPROACH

--THE PRESIDENT HAS PROMISED TO REDUCE SULFUR OXIDES BY MILLIONS OF TONS A YEAR, AND TO DO IT IN THIS CENTURY

0 IN ADDITION TO OUR DOMESTIC ENVIRONMENTAL GOALS, THE ADMINISTRATION INTENDS TO MAKE THE ENVIRONMENT A PRIORITY OF OUR FOREIGN POLICY

--FIRST, WE BEGIN WITH CANADA, OUR LARGEST TRADING PARTNER AND RECENT RATIFIER OF OUR FREE TRADE AGREEMENT

--CANADA'S ENVIRONMENT MINISTER RECENTLY CHARACTERIZED ACID RAIN AS THE SINGLE BIGGEST ISSUE IN CONTENTION BETWEEN OUR TWO COUNTRIES

--CANADIANS CANNOT UNDERSTAND WHY THE UNITED STATES HAS CONTINUED TO DUMP MILLIONS OF TONS OF ACIDIC POLLUTANTS ON SENSITIVE CANADIAN LAKES AND FORESTS

--I AM QUITE HOPEFUL THAT THE PRESIDENT'S PROPOSAL WILL BE EMBRACED BY THE CANADIAN GOVERNMENT AND PEOPLE

--SECOND, THE PRESIDENT WANTS TO DEMONSTRATE AMERICAN ENVIRONMENTAL LEADERSHIP AMONG THE COMMUNITY OF NATIONS

--IN THE DECADE AHEAD, ALL OF US WILL BE HEARING A LOT MORE ABOUT A WHOLE RANGE OF ENVIRONMENTAL PROBLEMS THREATENING GLOBAL ENVIRONMENTAL QUALITY

--STRATOSPHERIC OZONE DEPLETION, GLOBAL WARMING, LOSS OF PLANT AND ANIMAL SPECIES, DESERTIFICATION, OCEAN POLLUTION: ALL THESE WILL BE THE SUBJECT OF HEIGHTENED INTERNATIONAL DISCUSSION AND--I SUSPECT--NEGOTIATION

--IN FACT, I BELIEVE THAT GLOBAL ENVIRONMENTAL QUALITY WILL JOIN NATIONAL SECURITY AND INTERNATIONAL ECONOMICS AS THE BIG THREE ISSUES OF CONCERN AMONG NATIONS

--THE PRESIDENT'S CLEAN AIR INITIATIVE WILL DEMONSTRATE THAT HE IS WILLING TO ACT AGGRESSIVELY AT HOME TO SOLVE ENVIRONMENTAL PROBLEMS THAT CROSS NATIONAL BOUNDARIES

O I WANT YOU TO KNOW THAT BEFORE WRITING AN ACID RAIN BILL, WE CONSULTED VERY BROADLY

--WITH MEMBERS OF KEY COMMITTEES OF THE HOUSE AND SENATE, AND WITH SEVERAL GOVERNORS

--WITH INDUSTRY TRADE ASSOCIATIONS, ENIRONMENTAL GROUPS, AND TRADE UNION REPRESENTATIVES

--AS YOU CAN IMAGINE, WE RECEIVED ALL SORTS OF ADVICE

--DON'T MAKE MY CONSTITUENTS PAY FOR A PROBLEM CREATED BY OTHERS

--IF THIS IS A NATIONAL PROBLEM, THE NATION AS A WHOLE SHOULD PAY TO CLEAN IT UP

--PROTECT THE JOBS OF THOUSANDS OF HIGH SULFUR COAL MINERS, AND PROTECT THE COMMUNITIES THEY LIVE IN

--REQUIRE SCRUBBERS: THEY'LL WORK AND THEY'LL SAVE JOBS, TOO

--DON'T REQUIRE SCRUBBERS: THEY'RE EXPENSIVE AND A DRAIN ON EFFICIENCEY

--ALLOW MAXIMUM FLEXIBILITY AND FUEL SWITCHING ON THE PART OF UTILITIES

--DEFER ACTION SO THAT CLEAN COAL TECHNOLOGY CAN COME ON LINE

--WE'VE WAITED LONG ENOUGH ALREADY, SO GO FOR EARLY GAINS

--REQUIRE REDUCTIONS OF TEN MILLION TONS IN ORDER TO BE CREDIBLE

--EIGHT MILLION TONS ARE ALMOST FIFTY PERCENT LESS EXPENSIVE THAN TEN MILLION TONS, SO THAT'S AS HIGH AS YOU CAN RESPONSIBILY GO

- HEARING ALL THIS ADVICE, AND REALIZING I WAS NOW SUPPOSED TO ACT ON IT, MADE ME APPRECIATE HOW VERY SATISFYING MY LIFE IN THE PRIVATE SECTOR HAD BEEN

  - --LISTENING TO THESE CONFLICTING VIEWS ALSO HELPED ME UNDERSTAND EVEN BETTER WHY THIS ISSUE HAS BEEN STALEMATED FOR SO LONG

  - --THE TRADEOFFS ARE VERY DIFFICULT

    - --EAST VERSUS WEST, HIGH SULFUR COAL AREAS VERSUS LOW SULFUR COAL AREAS, THE NORTHEAST VERSUS THE MIDWEST, THE UNITED STATES VERSUS CANADA, ENVIRONMENTAL GOALS VERSUS JOBS

  - --ACID RAIN IS AN ISSUE OF ALMOST CLASSICAL ASSYMETRY BETWEEN THOSE WHO BEAR THE BURDENS AND THOSE WHO REAP THE BENEFITS

    - --THE PEOPLE WHO PAY FOR CLEAN-UP AND THE PEOPLE WHO ENJOY THE BENEFITS OF CLEAN-UP WILL <u>NOT</u> BE THE SAME

- AND SO NOW THE PRESIDENT MUST DECIDE

  - --ALL I CAN SAY TO YOU AT THIS TIME IS THAT I BELIEVE OUR BILL WILL:

    - --GO A LONG WAY TOWARD SOLVING THE ACID RAIN PROBLEM

    - --BREAK NEW GROUND IN ENVIRONMENTAL REGULATORY POLICY

    - --<u>NOT</u> ADD TO FEDERAL BUDGET OUTLAYS

    - --SET ACHIEVABLE AND AFFORDABLE GOALS, AND

    - --INVOLVE INDUSTRY'S SUBSTANTIAL KNOW-HOW IN ATTAINING THOSE GOALS

  - --BASICALLY, WE'D LIKE TO ACHIEVE OUR ACID RAIN GOALS BY USING <u>MARKET FORCES</u> AS MUCH AS POSSIBLE

    - --IN FACT, OUR PROPOSAL WILL INCORPORATE MORE EXTENSIVE MARKET MECHANISMS THAN ANY PREVIOUS PIECE OF ENVIRONMENTAL LEGISLATION

--OUR GOAL IS SIMPLE ENOUGH: WE WANT TO GIVE UTILITY MANAGERS MAXIMUM FLEXIBILITY IN HITTING ENVIRONMENTAL TARGETS

--WHETHER WE NEED ACID RAIN CONTROLS IS SOCIETY'S BUSINESS

--BUT HOW WE CONFIGURE THOSE CONTROLS IS BEST LEFT TO THE UTILITIES

--WE HAVE GONE TO CONSIDERABLE EFFORT TO MAXIMIZE UTILITY FLEXIBILITY IN OUR BILL, BECAUSE WE WANT TO PUT YOUR UNIQUE SKILLS TO WORK PROTECTING THE ENVIRONMENT

--WE WANT TO MAKE SURE THAT ACIDIC AIR EMISSIONS ARE CONSIDERED EXPLICITLY IN YOUR LONG-RANGE PLANNING PROCESS

--I REALLY WANT TO EMPHASIZE THIS POINT: THE PRESIDENT'S ACID RAIN PROPOSAL COULD FUNDAMENTALLY CHANGE THE WAY WE APPROACH POLLUTION PROBLEMS IN THIS COUNTRY

--INSTEAD OF COMMANDING-AND-CONTROLLING AFTER THE FACT, OUR LAW WOULD ENCOURAGE YOU TO INTERNALIZE YOUR ENVIRONMENTAL COSTS WHILE YOU PLAN FOR FUTURE GROWTH

--AIR POLLUTION IS ONE OF THE COSTS OF GENERATING ELECTRICITY FROM FOSSIL FUEL FIRED POWER PLANTS

--YOU ARE EXPERTS AT MINIMIZING COSTS

--THIS BILL ALLOWS YOU TO USE THAT EXPERTISE TO MINIMIZE ACIDIC AIR POLLUTION

--IN SHORT, OUR BILL WILL REWARD GOOD ECONOMIC SENSE, AND REWARD TECHNOLOGY DEVELOPMENT

--THIS IS ONE OF THE PRIMARY REASONS I AM SO PROUD OF OUR PROPOSAL: IT ENLISTS THE FORCE OF THE MARKET IN THE FIGHT AGAINST AIR POLLUTION

--I HOPE WE CAN DO A LOT MORE OF THAT IN OTHER ENVIRONMENTAL AREAS

0 I THINK THE PRESIDENT'S PROPOSAL WILL SURPRISE A LOT OF PEOPLE FOR ANOTHER REASON AS WELL: IT MOVES VERY QUICKLY

--IN THAT SENSE, TOO, IT'S MORE LIKE A PRIVATE SECTOR BUSINESS PLAN THAN A GOVERNMENT REGULATION

--WE KNOW WHAT WE WANT TO ACHIEVE ENVIRONMENTALLY, WE KNOW YOU ARE MOST QUALIFIED TO GET US THERE, SO WE'RE GOING TO SET THE GOALS AND THEN LET YOU GET ON WITH THE JOB

--WE ARE DETERMINED TO CUT ACIDIC AIR EMISSIONS SUBSTANTIALLY BY THE TURN OF THE CENTURY

0 TO SUM UP, I THINK THE PRESIDENT'S ACID RAIN INITIATIVE WILL BE A TOUGH, EFFECTIVE BILL THAT IS REMARKABLE FOR SEVERAL REASONS

--THROUGH THE PRESIDENT'S COMMITMENT, IT PROMISES TO BREAK A DOMESTIC POLITICAL LOGJAM THAT HAS FRUSTRATED THE COUNTRY FOR A DECADE

--IT EXERTS AMERICAN ENVIRONMENTAL LEADERSHIP ON THE INTERNATIONAL STAGE

--IT ENLISTS MARKET FORCES IN THE FIGHT TO PROTECT THE ENVIRONMENT

--AND IT RESULTS IN REAL, MEASURABLE ENVIRONMENTAL BENEFITS BEFORE THE TURN OF THE CENTURY, AND THEN PROTECTS THOSE BENEFITS FOR DECADES TO COME

0 I FEEL VERY PRIVILEGED TO HAVE WORKED ON THE PRESIDENT'S CLEAN AIR ACT PROPOSAL

--IT IS A LANDMARK BILL THAT COULD CHANGE THE WAY THIS COUNTRY APPROACHES ENVIRONMENTAL PROBLEMS

--AS SUCH, IT WOULD HAVE RAMIFICATIONS FAR BEYOND THE UTILITY INDUSTRY AND THE ACID RAIN PROBLEM

--I PLAN TO SUPPORT IT ANY WAY I CAN

--GIVEN THE PRESIDENT'S COMMITMENT, GIVEN THE EXPECTATIONS OF THE AMERICAN PEOPLE, GIVEN THE ALTERNATIVES, I HOPE YOU DO, TOO

JUNE 6, 1989

WKR CLEAN AIR ACT QUOTE

"IF ENACTED, THIS BILL WILL MARK THE BEGINNING OF A NEW ERA IN ENVIRONMENTAL PROTECTION: THE CLEAN AIR DECADE OF THE 1990s. BY THE TURN OF THE CENTURY, ACID RAIN POLLUTANTS WILL BE REDUCED BY NEARLY HALF, MOST URBAN AREAS IN THE COUNTRY WILL FINALLY ATTAIN NATIONAL CLEAN AIR STANDARDS, AND TOXIC AIR POLLUTANTS WILL BE SLASHED BY TENS OF MILLIONS OF POUNDS A YEAR.

THIS IS A REMARKABLE BILL--A LANDMARK PIECE OF LEGISLATION. IT EXERTS STRONG FEDERAL LEADERSHIP IN THE FACE OF BOTH DOMESTIC AND INTERNATIONAL POLLUTION PROBLEMS. IT MAKES EARLY, SHARP CUTS IN AIR EMISSIONS NATIONWIDE, AND THEN SUSTAINS THAT PROGRESS ON INTO THE 21ST CENTURY. AND WHAT'S ESPECIALLY EXCITING, IT INCORPORATES MORE EXTENSIVE MARKET MECHANISMS THAN ANY PREVIOUS ENVIRONMENTAL LAW. BY PUTTING MARKET FORCES TO WORK, THIS BILL FUNDAMENTALLY CHANGES THE WAY WE PROTECT THE ENVIRONMENT IN THIS COUNTRY."

Flexible Cost Effective

Emissions trading would allow automobile manufacturers to trade required reductions with another vehicle or manufacturer which has the ability to achieve reductions more cheaply. This gives manufacturers flexibility to meet new emission standards (on average), rather than for every vehicle or class of vehicles.

Fuel pooling allows fuel refiners and marketers to select any blend of alternative fuels and cleaner oil products that would allow them to meet an average standard set by EPA for fuel cleanliness. This increases the flexibility of refiners to meet environmental standards for their products. Refiners would also be able to trade emissions credits with each other.

[illegible] an interest in promoting

an energy-equivalent basis.[10] The estimates submitted by DOE falls between that of EPA and OMB.[11]

If methanol does turn out to be expensive, government action will be required to ensure its availability at competitive wholesale prices. One might employ a system of taxes, subsidies, or price controls to bring this about, but such regulatory interventions in the market have not worked well in the past, particularly in the 1970's. CEA believes that an approach based on fuel-pooling is likely to be the most workable alternative. Under such a program, federal or state regulators would place restrictions on the average contents of various components of fuels. The most obvious candidates would be aromatics, such as benzene, and toxics, such as formaldehyde. Producers of transportation fuels would be allowed to meet these performance standards by trading, averaging, and banking, in much the same manner as the trading which EPA engineered during the phase-out of lead from gasoline.[12] Such schemes would provide a strong incentive for alternative clean fuels to be introduced.[13]

DOE and OMB asked how consumers could be induced to purchase flexible-fueled vehicles, which would be more expensive to produce than otherwise equivalent gasoline powered vehicles. One approach, analogous to CAFE, would be to require manufacturers to adjust their prices on flexible fueled vehicles in nonattainment areas so that consumers purchased at least 50% flexible fueled or dedicated vehicles. If the CAFE model is used or the CAFE

---

[10] Moreover, OMB noted that a key difference between the proposed program and the introduction of unleaded gasoline is that the unleaded program applied nationally whereas this program is targeted to specific areas, leading to implementation problems.

[11] See Table A3 for a comparison of estimates of various prices. OMB appears to be most comfortable with the SRI estimates. EPA, on the other hand, has argued that the SRI estimates significantly overstate the expected price of methanol at the pump. CEA believes that the SRI estimates probably overstate the price of methanol somewhat. It is interesting to note that the studies by EPA and DOE are relatively similar in their assumptions when compared to the SRI study.

[12] California is already investigating how to implement this concept.

[13] We believe it is important to structure a fuel pooling proposal so that it provides maximum flexibility in achieving the desired environmental objective. It is also critical that the option not be designed in such a way that it effectively becomes a mandate.

we don't have to summon that wisdom from
~~you don't have to do any more studies~~ -- you just have to
look out the window.

atmosphere of
gridlock / FRUSTRATION

this is not an intractable, inevitable problem -- it can
be solved -- if we have the will

There is no room for permission in the fight against pollution.
We have a world to save

A President said /
When I said a new breeze is blowing... ~~[illegible]~~

We all carried with it sulfur dioxide, , .
some did damage to
some hurt people who didn't even see it coming

All that all changed in 1989.

the West Wind ~~[illegible]~~ was cleansed
the
the integrity of nature made whole again.

Ours is the opportunity to undo the price
of degeneration, in the service of the spirit.
We cannot, must not fail.
We must prevail.

about Twenty years ago

Twenty years from now, Every Am, in
every city in Am.

{ The same alt fuels that reduce Ozone also reduce CO. }

some good thinking on the bill
back off on Wieth, Heisig
praise of

~~new legislature~~

~~new legislature~~

reverse the ers

60

582-7

ACID RAIN

☆ TRADING REDUCTIONS the intellectual centerpiece

- federalism
- local flexibility

{the new environmentalism}

GB - my concern is getting the maximum amt. of env. protec within that, allow flexib as to how. let mkt. decide +

LETTING THE MKT drive it.
creative, business

Areas were lied.

☆ GIVE AND TO: { Env. Defense Fund / Project 88 } were on new edge

TIME TO CREATE MYTH:
there's nothing incomp. between econ growth & environ protection

in fact, they're mutually supporting

Bus & environ. profs: your interests complement.

the U.S. environ. prot. will be a growth industry under this admin,

((no retreat from standards))
we set standard, let industry decide how they're going to meet them
+ flexibility
least cost: your business can provide expertise
right incentives. Flexibility (c. of c.),
setting markets in motion, non-mandated.
also technology — our leadership (opportunity in world)

plants ought to be able to trade reductions among themselves; clear standards

(Lange/Wallace)
June 9, 1989
6:30 p.m.
[CLEANAIR.DOC]

PRESIDENTIAL REMARKS: CLEAN AIR ACT ANNOUNCEMENT
EAST ROOM
MONDAY, JUNE 12, 1989
11:00 A.M.

[Welcome]

You've heard the stories. Or written them. Or lived them.

Up in the mountains of Acadia National Park in Maine -- where the sun first touches the United States -- rangers have recorded ozone levels that would trigger a smog alert in Los Angeles. In L.A., before that sun sets, the fog in nearby areas can get as acidic as lemon juice.

And all over North America, our lakes and streams are in danger. Trees are being ravaged by acid rain. The Germans call it Waldsterben -- forest death.

In a few weeks, all you'll have to do is look out the window. Or turn on the radio. You'll hear that older people shouldn't venture out. That kids shouldn't go outside to play.

From this year forward -- with enough support from Congress -- all of that will begin to change.

We should remember how far we've come -- and recognize what works. The 1970 Clean Air Act got us moving in the right direction -- with national air quality standards, and tighter tailpipe emissions. Amendments in 1977 set even stronger emissions standards.

And since 1978 -- in spite of x times as many cars, going y as far -- in spite of more manufacturing productivity, more utility output, and more industrial production -- we've still made progress. Lead concentrations in the air we breathe are down 98 percent. Sulfur dioxide and carbon monoxide: cut by over a third. Particulate matter: cut 21 percent.

The environmental movement has a long history in this country. It has been a force for good -- building a safer, healthier America -- during times of phenomenal economic growth. As a people, we have come to expect economic progress. We must now also **expect environmental responsibility** -- and **respect** for the natural world.

This will demand a new ethic of conservation. A national sense of commitment.

I reject the notion that sound ecology and a strong economy are an either-or proposition. So last week I outlined five points of a new environmental philosophy.

One: to harness the **power of the marketplace**
Two: to encourage **local initiative**
Three: to emphasize **prevention**, instead of just clean-up
Four: foster **international cooperation**, and
Five: to ensure **strict enforcement**. Pollution will stop.

We know more now. New solutions are close at hand. It is time to put our best minds to work. To turn technology and the power of the marketplace to advantage. To create. To innovate. To tip the scales in favor of recovery, restoration, and renewal.

Every American has the right to breathe clean air. And as President, it is my mission to guarantee that right: for this generation, and for generations to come.

If we take this mission seriously -- if we believe that every American has the right to breathe clean air, and **act** on that belief -- then the rest of the world will follow.

Today I am proposing to Congress a new Clean Air Act -- and offering a new opportunity. Over the last decade our progress against air pollution has been plagued by political stalemates.

Today, I'm asking Congress to cooperate. **And it's time to clear the air.**

And you know, I think we will. We've had the benefit of some good thinking on the Hill. Senators John Heinz and Tim Wirth. Congressman A to Z. We've gained the counsel of groups like Project 88, the Environmental Defense Fund, Harvard's Kennedy School, the business and industrial leaders of the Clean Air Working Group -- and many others.

I've heard the many voices who have a stake in this issue. Considered all of the options. Thought long and hard about the costs. And you know, people tend to paint these issues in stark contrasts: United States versus Canada; Northeast vs. Midwest; high sulfur coal regions vs. low; environmental goals vs. jobs. We have had to make some tough choices. Some may think we've gone too far -- and others, not far enough.

But we all care about clean air. Today, one hundred million Americans breathe unhealthy air. I'm concerned about vulnerable groups -- like the elderly, asthmatics, and children. Concerned about **every** American's quality of life. And committed to the natural legacy we pass on to ~~our children~~ the next generation.

Twenty years ago, we started the job. If Congress will act on the Clean Air reforms I'm offering today, twenty years from

now, **every** American, in **every city in America, will breathe clean air.** [L.A. → 2015?] Billy

The reforms we seek make major pollution reductions, where we most need them, first. Our approach has reasonable deadlines for those who must comply. It has compelling sanctions for those who don't. It accounts for continued economic growth and expansion. It ~~ties in more extensive market mechanisms~~ than any previous piece of environmental legislation. It will be comprehensive -- and cost effective -- **but above all, it will be effective. We will make the 1990s the era for clean air.**

[We have three clear goals -- and three clear deadlines.] First, we will cut the sulfur dioxide emissions that cause acid rain in half -- by ten million tons -- by the end of this century.

We have set absolute goals for reductions -- but recognize that once a standard is set, drawing on market forces is the fastest, most ~~cost-effective~~ way to achieve it.

[etc. -- the real stuff goes here]

[Rough conclusion:]

For ten years we have struggled to engage a united effort on behalf of clean air. We are now on the edge of real change.

1989 could be recorded as the year when business leaders and environmental advocates first worked toward complementary -- and not just competing -- interests. A year when environmental issues were moved out of the courts, and onto the national agenda. The moment when leadership, both public and private, mobilized to make environmental protection a growth industry.

Ours is a rare opportunity, to reverse the errors of this generation, in the service of the next. We cannot, must not fail.

We must prevail.

Thank you. God Bless you. And God Bless the United States of America.

# # #

June 8, 1989

FACT SHEET

CLEAN AIR ACT

Today, President Bush proposed innovative revisions to the Clean Air Act to strengthen the Law's current provisions and to require year-to-year improvements in cleaning up the Nation's air. The Administration's proposal calls for measures to reduce acid rain, urban smog, and air toxics. The President's proposal is a comprehensive approach to break the stalemate which has stalled progress toward clean air for over 10 years.

The President's proposals are grounded in the belief that every American has the right both to clean air and to be protected from the ill effects of toxic pollution. The proposals will also protect forests and lakes in both the Northeast and Canada, which have been impacted by acid rain.

The Clean Air Act, first passed in 1970, has achieved significant reduction in air pollution in the face of strong economic growth. Today, we as a Nation spend about $35 billion each year to control air pollution. Nevertheless, serious problems persist. Over 100 cities including 150 million people are not attaining the health standards for carbon monoxide and ozone. Acid rain is killing lakes and fish in many parts of the country and may be contributing to loss of vegetation in some areas. We know more about risks associated with certain toxic pollutants.

Further progress in achieving environmental protection, in the face of continued economic growth and greater use of the automobile requires innovative solutions to meet clean air goals.

The President's plan will:

- By the year 2000, reduce by 50 percent (10 million tons) sulfur dioxide emissions that cause acid rain.

- Bring all cities currently not meeting the health standards for ozone and carbon monoxide to attainment. Most cities will attain the standard by 1995, with a goal of achieving attainment in more severe cities by the year 2010 and steady progress up to that time.

- Require industrial sources emitting cancer-causing compounds to achieve a 75 to 90 percent reduction of those compounds, saving over three-fourths of the 1500 to 3000 cancer deaths they are suspected of causing yearly.

5 principles underlie the goals

Fundamental Principles

The President's proposal is based on ~~4~~ 5 points:

- o Protection of Public Health. The goal of the legislation is to prevent public ~~exposure~~ to cancer-causing agents and to protect those citizens, especially vulnerable populations, such as the elderly, asthmatics and children, who live in cities which don't attain the health standards.

I'm concerned about

- o Improved Quality of Life. The proposal will improve the quality of life by exercising responsible stewardship over our environment for future generations.

- o Early Reductions and Steady Progress. The proposal establishes realistic timeframes to meet air quality goals, but requires early reductions and steady progress.

- o Market Incentives (Power of the Marketplace). The proposal calls for the use of marketable permits to achieve acid rain reductions and emissions trading ~~and fuel pooling~~ to achieve reductions from automobile pollution.

local caterb/Hosb.?

- o ~~New~~ Innovative Technology. The proposal encourages development of clean coal technology, alternative fuel systems for automobiles, and other cost-effective innovations.

from Dallin/Heath

ACID RAIN

The President's proposal calls for: plus 2 NO_x (over)

- o A reduction of 10 million tons of sulfur dioxide by the year 2000, using a baseline year of 1980 for tons of SO_2 emitted, primarily from coal-fired power plants.

- o An extension to the year 2003 for plants adopting clean coal technologies.

- o A two-phase program with a first phase reduction of 1995 and a second phase reduction by 2000.

* - o A first phase reduction of ~~4 million tons~~ 7 of SO_2 by 1995 (from 1980 baseline levels), or a reduction of 5 million tons of SO_2.

* - o A first phase program covering 20 of the Nation's largest utilities, based on a 1.1 pound limit, or 107 plants primarily in the midwest required to meet a 2.5

Clarify for least cost; no new taxes

I will not raise cost of seat belt through fact
1st! When I say "utilities" I'm not including when talking about power plants.

pound limit.

- A 2 million ton reduction of NO_x or whatever results from full NO_x/SO_x trading.

- Maximum flexibility in obtaining reductions through a system of marketable permits to allow utilities to achieve required reductions in the most cost-effective manner. The first phase trading would occur among utilities within a state or within a utility system. Full interstate trading would be allowed in phase II.

- The estimated cost of the President's proposal would be $3.8 billion annually in the second phase, with first phase costs of ($0.8 to $1.3 billion). These costs are close to half as much as proposals mandating the use of specific technology.

- ~~cause acid rain,~~ travel across international borders and impact Canada, a bilateral accord between the United States and Canada will be negotiated shortly after passage of the legislation.

Americans currently spend $160 billion a year on electricity. The President's proposal is less than 3 percent of that total and would raise utility rates in the affected states only 3-4 percent.

Background

"Acid rain" occurs when sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions undergo a chemical change in the atmosphere and return to the earth.

Approximately 20 million tons of SO_2 are emitted annually in the U.S., three-quarters from the burning of fossil fuels by electric utilities; 20 percent from other, more widely dispersed industrial sources; and 5 percent from transportation sources. The source of most SO_2 emissions causing acid rain are old (pre-1971) electric power plants, not subject to the existing Clean Air Act's strict emissions requirements that regulate plants. The country's 50 largest power plants are responsible for about half of all SO_2 emissions. About 20 million tons of NO_x are emitted per year, with transportation sources accounting for half.

The National Acid Precipitation Assessment Program (NAPAP) is in the process of completing its 10 year mission to study the causes and effects of acid rain. By the time its final report is released in 1990, the government will have invested $500 million to study these important issues.

Since 1970, the U.S. has spent $225 billion to control SO_2 and

NO_x. American industry spends about $33 billion a year on ~~controls ($10 billion by the electric utility industry).~~

Any acid rain control program will increase electricity rates for affected utilities. Generally speaking, however, proposals with greater flexibility will result in smaller rate increases. Electric rate increases would be most severe in the midwest. Estimates of the increase in the most affected states range from 2 percent to 7 percent. Americans spend over $160 billion per year on electricity. At the most, any acid rain controls currently proposed here and elsewhere would cost less than 5 percent of that total.

URBAN AIR QUALITY

"Despite good progress in reducing emissions from cars, factories, and power plants, more than 100 cities still do not meet federal clean air standards.

"Urban ozone is one of the most complex and difficult environmental issues facing this country...To really tackle this problem, will affect the way we work, live and play..."

Scripps Institution, October 14, 1988

Urban air quality focuses on three pollutants of concern: ground-level ozone, carbon monoxide, and particulates. The most widespread problems are caused by ozone.

Over 100 million people live in 81 cities across the country that exceed the health standard for ozone. In some cities, such as Los Angeles, the situation is persistent and severe (176 days in violation of the health standard in 1988); in other cities the problem is marginal (Lancaster, PA, is listed as non-attainment, but, in fact, has exceeded the Federal standard only 4 hours in the last 3 years). In 9 metropolitan areas with population over 40 million (principally in California, the Texas Gulf Coast, and the Northeast corridor from Washington, DC, to Boston) the problem is so serious or severe, that it cannot be remedied with traditional approaches.

Control programs under current law, including automobile and truck tailpipe emission standards, inspection and maintenance, volatility controls, and selected stationary source controls will be able to significantly reduce ozone causing emissions, but will leave 70 or more cities out of attainment.

The President's proposals will impose nationwide measures: gasoline volatility regulations, first-time regulations to control commercial and consumer solvents, hazardous waste

1978 - 1988 ~~annual~~ avg. data

Industrial output up 28.8%

Utility output up 27.2%

Private business production 11.2%

Manf. product 34.2%

Real GNP 28.3%

facility regulations, and controls on eva
vehicles. These are among the most cost-
will bring 47 (over half) of the cities i
controls will still leave 34 cities out o
cities, the President's proposal undertak
by:

- o Proposing an innovative market-l
both ozone and toxics emissions

- o Targeting our Nation's automobi
which still account for nearly h
problems.

- o ~~Committing to~~ alternative fuels,
methanol, natural gas, and ethar
reduce ozone ~~precursors.~~

- o Setting a performance-based star
same level of reductions as thos
traditional approaches, but encc
trading, ~~fuel-pooling~~, and maximum flexibility to
obtain the goal.

- o Setting new stringent vehicle emissions standards, allowing averaging, banking, and trading of emissions credits among companies. These performance standards can be met by a variety of automobile controls, including traditional tailpipe controls, as well as the manufacturing and marketing of clean-burning alternative fuel vehicle.

Promoting fuel pooling, targeting toxic constituents of gasoline, ~~such as benzene, toluene and xylene~~, and allowing averaging, banking and trading of credits among companies.

- o Providing realistic timetables for attainment, tailored to the seriousness of the non-attainment problem in given areas. (Most areas would be required to attain by 1995. About 20 areas would be given until 2000. A deadline of 2010 would be allowed for the most severe areas (Los Angeles, New York and Houston) if they cannot attain by 2000, but in return, a demonstration of annual progress toward attainment would be required.)

- o Discretionary sanctions would be available to EPA if areas do not show progress toward attaining the standard.

(Lange/Wallace)
June 9, 1989
6:30 p.m.
[CLEANAIR.DOC]

PRESIDENTIAL REMARKS: CLEAN AIR ACT ANNOUNCEMENT
EAST ROOM
MONDAY, JUNE 12, 1989
11:00 A.M.

[Welcome]

You've heard the stories. Or written them. Or lived them.

Up in the mountains of Acadia National Park in Maine -- where the sun first touches the United States -- rangers have recorded ozone levels that would trigger a smog alert in Los Angeles. In L.A., before that sun sets, the fog in nearby areas can get as acidic as lemon juice.

And all over North America, our lakes and streams are in danger. Trees are being ravaged by acid rain. The Germans call it Waldsterben -- forest death.

In a few weeks, all you'll have to do is look out the window. Or turn on the radio. You'll hear that older people shouldn't venture out. That kids shouldn't go outside to play.

From this year forward -- with enough support from Congress -- all of that will begin to change.

We should remember how far we've come -- and recognize what works. The 1970 Clean Air Act got us moving in the right direction -- with national air quality standards, and tighter tailpipe emissions. Amendments in 1977 set even stronger emissions standards.

And since 1978 -- in spite of x times as many cars, going y as far -- in spite of more manufacturing productivity, more utility output, and more industrial production -- we've still made progress. Lead concentrations in the air we breathe are down 88 percent. Sulfur dioxide and carbon monoxide: cut by over a third. Particulate matter: cut 21 percent.

The environmental movement has a long history in this country. It has been a force for good -- building a safer, healthier America -- during times of phenomenal economic growth. As a people, we have come to expect economic progress. We must now also **expect environmental responsibility** -- and **respect** for the natural world.

This will demand a new ethic of conservation. A national sense of commitment.

I reject the notion that sound ecology and a strong economy are an either-or proposition. So last week I outlined five points of a new environmental philosophy.

One: to harness the **power of the marketplace**
Two: to encourage **local initiative**
Three: to emphasize **prevention**, instead of just clean-up
Four: foster **international cooperation**, and
Five: to ensure **strict enforcement.**

We know more now. New solutions are close at hand. It is time to put our best minds to work. To turn technology and the power of the marketplace to advantage. To create. To innovate. To tip the scales in favor of recovery, restoration, and renewal.

Every American has the right to breathe clean air. And as President, it is my mission to guarantee that right: for this generation, and for generations to come.

If we take this mission seriously -- if we believe that every American has the right to breathe clean air, and **act** on that belief -- then the rest of the world will follow.

Today I am proposing to Congress a new Clean Air Act -- and offering a new opportunity. ~~Over the last decade our progress against air pollution has been plagued by political stalemates.~~

~~Today, I'm asking Congress to cooperate. And it's time to clear the air.~~

And you know, I think we will. We've had the benefit of some good thinking on the Hill. Senators John Heinz and Tim Wirth. Congressman A to Z. We've gained the counsel of groups like Project 88, the Environmental Defense Fund, Harvard's Kennedy School, the business and industrial leaders of the Clean Air Working Group -- and many others.

I've heard the many voices who have a stake in this issue. Considered all of the options. Thought long and hard about the costs. And you know, people tend to paint these issues in stark contrasts: United States versus Canada; Northeast vs. Midwest; high sulfur coal regions vs. low; environmental goals vs. jobs. We have had to make some tough choices. Some may think we've gone too far -- and others, not far enough.

But we all care about clean air. Today, one hundred million Americans breathe unhealthy air. I'm concerned about vulnerable groups -- like the elderly, asthmatics, and children. Concerned about **every** American's quality of life. And committed to the natural legacy we pass on to our children.

Twenty years ago, we started the job. If Congress will act on the Clean Air reforms I'm offering today, twenty years from

now, **every** American, in **every city in America, will breathe clean air.**

The reforms we seek make major pollution reductions, where we most need them, first. Our approach has reasonable deadlines for those who must comply. It has compelling sanctions for those who don't. It accounts for continued economic growth and expansion. It ties in more extensive market mechanisms than any previous piece of environmental legislation. It will be comprehensive -- cost effective -- **but above all, it will be effective. We will make the 1990s the era for clean air.**

We have three clear goals -- and three clear deadlines. First, we will cut the Sulfur dioxide emissions that cause acid rain in half -- by ten million tons -- before the end of this century.

We have set absolute goals for reductions -- but recognize that once a standard is set, drawing on market forces is the fastest, most cost-effective way to achieve it.

[etc. -- the real stuff goes here]

[Rough conclusion:]

For ten years we have struggled to engage a united effort on behalf of clean air. We are now on the edge of real change.

1989 could be recorded as the year when business leaders and environmental advocates first worked toward complementary -- and not just competing -- interests. A year when environmental issues were moved out of the courts, and onto the national agenda. The moment when leadership, both public and private, mobilized to make environmental protection a growth industry.

Ours is a rare opportunity, to reverse the errors of this generation, in the service of the next. We cannot, must not fail.

We must prevail.

Thank you. God Bless you. And God Bless the United States of America.

# # #

ward, even though one throw it into the air ten thousand times.
ARISTOTLE: *The Nicomachean Ethics*, II, *c.* 340 B.C.

Whatever befalls in the course of nature should be considered good.
CICERO: *De senectute*, XIX, *c.* 78 B.C.

Nature without education has oftener raised man to glory and virtue than education without natural abilities.
CICERO: *Pro archia poeta*, 62 B.C.

Nature resolves everything into its component elements, but annihilates nothing.
LUCRETIUS: *De rerum natura*, I, 57 B.C.

Those things are better which are perfected by nature than those which are finished by art.
CICERO: *De natura deorum*, II, 45 B.C.

Drive out nature with a pitchfork, and she will always come back.
HORACE: *Satires*, I, *c.* 25 B.C.

God made the beauties of nature like a child playing in the sand.
Ascribed to APOLLONIUS OF TYANA (*c.* 10 B.C.–80 A.D.)

It is difficult to change nature. (Naturam mutare difficile est.)
SENECA: *De Ira*, II, *c.* 43

It is hard to make out whether [nature] is a kind parent or a harsh stepmother to man.
PLINY THE ELDER: *Natural History*, VII, *c.* 79

Never does nature say one thing and wisdom another. JUVENAL: *Satires*, XIV, 128

All nature is good.
ST. AUGUSTINE: *Of Continence*, *c.* 425

Nature is the art of God Eternal.
DANTE: *De monarchia*, *c.* 1320

Nature never breaks her own laws.
LEONARDO DA VINCI: *Notebooks*, *c.* 1500

Nature is the right law.
JOHN FLORIO: *First Frutes*, 1578

Let us permit nature to have her way: she understands her business better than we do.
MICHEL DE MONTAIGNE: *Essays*, III, 1588

The prodigality of nature.
SHAKESPEARE: *Richard III*, I, *c.* 1592

Such is the nature of the beast.
ENGLISH SAYING, traced to the XVII century

To hold, as 't were, the mirror up to nature.
SHAKESPEARE: *Hamlet*, III, *c.* 1601

Nature her custom holds,
Let shame say what it will.
SHAKESPEARE: *Hamlet*, IV

One touch of nature makes the whole world kin.
SHAKESPEARE: *Troilus and Cressida*, III, *c.* 1601

Nothing in nature is unserviceable,
No, not even inutility itself.
JOHN MARSTON: *Sophonisba*, II, 1606

Thou, nature, art my goddess; to thy law
My services are bound.
SHAKESPEARE: *King Lear*, I, 1606

Nature's above art.
SHAKESPEARE: *King Lear*, IV

In nature's infinite book of secrecy
A little I can read.
SHAKESPEARE: *Antony and Cleopatra*, I, *c.* 1606

Nature uses as little as possible of anything.
JOHANN KEPLER: *Astronomia nova*, 1609

How hard it is to hide the sparks of nature!
SHAKESPEARE: *Cymbeline*, III, *c.* 1609

Nature is often hidden, sometimes overcome, seldom extinguished.
FRANCIS BACON: *Essays*, XXXVIII, 1612

Nature is not governed except by obeying her.
FRANCIS BACON: *De augmentis scientiarum*, III, 1623

Nature is no botcher.
JOHN CLARKE: *Parœmiologia Anglo-Latina*, 1639

There are no grotesques in nature; not anything framed to fill up empty cantons, and unnecessary spaces.
THOMAS BROWNE: *Religio Medici*, XV, 1642

Nature is not at variance with art, nor art with nature, they being both servants of His providence: art is the perfection of nature; were the world now as it was the sixth day, there were yet a chaos; nature hath made one world, and art another. In brief, all things are artificial; for nature is the art of God.
THOMAS BROWNE: *Religio Medici*, XVI

Nature seldom gives us the very best; for that we must have recourse to art.
BALTASAR GRACIÁN: *The Art of Worldly Wisdom*, XII, 1647

Accuse not nature, she hath done her part;
Do thou but thine!
JOHN MILTON: *Paradise Lost*, VIII, 1667

Nature has some perfections, to show that she is the image of God; and some defects, to show that she is only His image.
BLAISE PASCAL: *Pensées*, XXIV, 1670

Nature has no goal in view, and final causes are only human imaginings.
BARUCH DE SPINOZA: *Ethica*, I, 1677

(Lange/Wallace)
June 9, 1989
6:30 p.m.
[CLEANAIR.DOC]

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EAST ROOM
MONDAY, JUNE 12, 1989
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And all over North America, our lakes and streams are in danger. Trees are being ravaged by acid rain. The Germans call it Waldsterben -- forest death.

In a few weeks, all you'll have to do is look out the window. Or turn on the radio. You'll hear that older people shouldn't venture out. That kids shouldn't go outside to play.

From this year forward -- with enough support from Congress -- all of that will begin to change.

Post Labor Our labor & taste -- ~~not to mention the monuments down the street~~ -- will not suffer this

"Let us permit nature to have her way"

~~O~~ four hundred years ago, "She Montaigne wrote,

understands her business better than we do."

~~It's~~ true. ~~It's~~ also true ~~that~~ business understands its business better than we do. so we need to put that understanding to work, ~~for the state~~ on behalf of ~~the~~ environment. ~~natural~~ In this legislation were clean air-

providing market incentives, choice, and flexibility for industry and local communities to find the best solutions. We stand firm on what must be achieved -- but will allow flexibility in how industry achieves it-

But we should remember how far we've come -- and recognize what works. The 1970 Clean Air Act got us moving in the right direction -- with national air quality standards, and tighter tailpipe emissions. Amendments in 1977 set even stronger emissions standards.

So since 1970 -- even though we've got 55 percent more cars, going 50 percent farther -- in spite of more manufacturing productivity, more utility output, and more industrial production -- we've <u>still</u> made progress. Lead concentrations in the air we breathe are down 98 percent. Sulfur dioxide and carbon monoxide: cut by over a third. Particulate matter: cut 21 percent.

The environmental movement has a long history in this country. It has been a force for good -- for a safer, healthier America -- during times of phenomenal economic growth. As a people, we have come to expect economic progress. We must now also **expect environmental responsibility** -- and **respect** for the natural world.

This will demand a national sense of commitment. A new ethic of conservation.

Still, over the last decade, our progress against air pollution has been plagued by ~~talking about~~ political ~~gridlock~~ paralysis. We have to break this logjam, by ~~telling~~ the ~~truth~~ ~~about~~ ~~to~~ ~~the~~ ~~American people~~ the innovation and ingenuity of the marketplace, ~~and the~~ government acting on ~~what~~ ~~it~~ ~~can~~ ~~do~~ ~~it~~ ~~well~~ to work on ~~the~~ the environment.

I reject the notion that sound ecology and a strong economy are an either-or proposition. So last week I outlined five points of a new environmental philosophy:

One -- to harness the **power of the marketplace**

Two -- to encourage **local initiative**

Three -- to emphasize **prevention**, instead of just clean-up

Four -- foster **international cooperation**, and

Five -- to ensure **strict enforcement. Polluters will pay.**

We know more now. New solutions are close at hand. It is time to put our best minds to work. To turn technology and the power of the marketplace to advantage. To create. To innovate. To tip the scales in favor of recovery, restoration, and renewal.

Every American has the right to breathe clean air. And as President, it is my mission to guarantee that right: for this generation, and for generations to come.

If we take this mission seriously -- if we believe that every American has the right to breathe clean air, and **act** on that belief -- then we, together with our neighbors north & south, can set an example for the rest of the world ~~will~~ follow.

Bybee: Fr Scowcroft

Today ~~Today I~~ am proposing to Congress a new Clean Air Act -- offering a new opportunity. ~~Over the last decade our progress against air pollution has been plagued by political stalemates.~~

~~Today,~~ I'm asking Congress to cooperate. **Enough** of this poisonous atmosphere. **It's time to clear the air.**

And you know, I think we will. We've had the benefit of some good thinking on the Hill. Senators John Heinz and Tim Wirth. Congressman A to Z. We've gained the counsel of groups like Project 88, the Environmental Defense Fund, Harvard's Kennedy School, the business and industrial leaders of the Clean Air Working Group -- and many others.

I've heard the many voices who have a stake in this issue. Considered all of the options. Thought long and hard about the costs. ~~And you know,~~ people tend to paint these issues in stark contrasts: United States versus Canada; Northeast vs. Midwest; high sulfur coal regions vs. low; environmental goals vs. jobs. We have had to make some tough choices. Some may think we've gone too far -- and others, not far enough.

But we all care about clean air. Today, one hundred million Americans breathe unhealthy air. I'm concerned about vulnerable groups -- like the elderly, asthmatics, and children. Concerned about **every** American's quality of life. And committed to the natural legacy we pass on to coming generations.

Twenty years ago, we started the job. If Congress will act on the Clean Air reforms I'm offering today, twenty years from

now, **every** American, in **every city in America, will breathe clean air.** [check w/ Reilly -- 2015?]

The reforms we seek make major pollution reductions, where we most need them, first. Our approach has reasonable deadlines for those who must comply. It has compelling sanctions for those who don't. It accounts for continued economic growth and expansion. It taps the power of the marketplace better ties in more extensive market mechanisms than any previous piece of environmental legislation. It will be comprehensive -- and cost effective -- **but above all, it will be effective. We will make the 1990s the era for clean air.**

MEAT:

Bold

We have three clear goals -- and three clear deadlines.??

First, we will cut the sulfur dioxide emissions that cause acid rain in half -- by ten million tons -- by the end of this century. and cut nitrogen oxide levels by two million tons --

We have set absolute goals for reductions -- but we recognize that once a standard is set, tapping drawing on market forces is the fastest, most ~~cost-effective~~ efficient way to achieve it. and have swift early reductions

So we're allowing companies to trade credits among themselves for reductions they make, ~~among themselves~~ [through a system of marketable permits] -- so that they can decide how to (collectively) bring (aggregate) levels down as cost-effectively as possible. ~~But they will bring them down. This is no "license to pollute" -- we've set standards, and they will be met. Nor is it a hidden~~

coal burning utilities, auto. manuf., fuel refiners --

(X) than ever (O)

We stand firm on what must be achieved -- but will allow flexibility in how industry achieves it.

Environmental problems are going to be solved through actions taken in every community across the country.

And in this legislation we're providing market incentives, free choice, and flexibility for industry to find the best solutions.

We can afford it. To the cost of electricity, an acid rain control program will add just over a penny on the dollar in the 1990s -- and about two and a half cents on the dollar after the year 2000. But this goes beyond cost-benefits calculations. We can't afford not to.

To allow flexibility -- and achieve these reductions at the lowest possible cost -- we're allowing utilities to "trade" allowed emissions, so that emissions will be reduced by those who can do it most cost-effectively.

We've already invested $500 million in studies. Now we're putting what we know to work.

And yet, today the Tetons are again threatened by development. And this time the threat comes not from steam engines and logging saws, but from the very West Wind that shaped those peaks, bearing the often invisible acids that gust in from the sun-baked smog of the ~~coast.~~ cities.

It's ironic that, as I've visited with people in these mountains, again and again people say how nice it is to get away from urban air pollution. Well, the bad news is: It's starting to follow you here. But the good news is: We're not going to put up with it any longer. Not here. And not at home where you live most of your lives.

Bold

The clean air initiatives we launched yesterday at the White House mark a new chapter in the tradition of protecting our people and their parks. And with the help of Congress, we will ~~conquer the challenges of acid, ozone and emissions.~~ Wherever the next generation may find your children, our goal is nothing less than an America where all the air breathes as clean as morning in the Rockies. ~~Let's cross those frontiers.~~

reduce emissions by 10 million tons - that's 50% by the year 2000. We will provide a cotton cap for business but reform from encouraging their ability to meet it. We will not bring cities into compliance with clean air standards by 1995. We will reduce industrial emissions to contribute 90% by [illegible] [1500 cancer death]

June marks the beginning of summer. A family time. A time of remembrance and tradition. An estimated 300 million visitors will come to America's national parks this year -- and yes, I know it sometimes seems like most of them are camped out at your campsite. And with each new day, American families clamber across the craggy trails above us, around Jenny Lake and Paintbrush Canyon, and the aptly-named Rock of Ages. Hands young and old press against the hard basement rock -- exposed by the

generations

80% 2010

all by year 2000.

ADDEND 1

TO: MARK

FROM: RETT

RE: CLEAN AIR

SENATORS

Chafee, John	Rhode Island (R)
Burdick, Quentin	North Dakota (D)
Baucus, Max	Montana (D)
Lautenberg, Frank	New Jersey (D)
Mitchell, George	Maine (D)
& Simpson, Al	Wyoming (D)

REPRESENTATIVES

Lent, Norman & Madigan, Edward	New York (R) and Illinois (R)
Boehlert, Sherwood & Dingell, John	New York (R) and Michigan (D)
Waxman, Henry	California (D)

-- I will check with Legislative Affairs on the pairs of Representatives.

TO: MARK

FROM: RETT

CARS

1970	80 million
1978	103 million
1989	124 million

Change between 1970 and 1989: 1.55 or 55%

Change between 1978 and 1989: 1.20 or 20%

VEHICLE MILES TRAVELED

1970	797 billion
1978	995 billion
1989	1.203 trillion

Change between 1970 and 1989: 1.51 or 51%

Change between 1978 and 1989: 1.21 or 21%

Source: Don Zinger E.P.A.
382-7647

(Lange/Wallace)
June 9, 1989
5:20 p.m.
[CLEANAIR.DOC]

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This will demand a new ethic of conservation. A national sense of ~~responsibility~~ commitment.

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Five: to ensure **strict enforcement**.

We ~~have new knowledge now~~ know more now. New solutions are close at hand. It is time to put our best minds to work. To turn technology and the power of the marketplace to advantage. To ~~find cost-effective, market-driven~~ create innovative innovations. To tip the scales in favor of recovery, restoration, and renewal.

Every American has the right to breathe clean air. As President ~~I will personally~~ it is my mission to guarantee that right: for this generation, and for generations to come. And

If we take ~~our~~ this mission seriously -- if we believe that every American has the right to breathe clean air, and **act** on that belief -- then the rest of the world will follow.

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pollution has been plagued by political stalemates. Today, I'm asking Congress to cooperate. And **It's time to clear the air.**

And you know, I think we will. We've had the benefit of some ~~of the best~~ good thinking on the Hill. Senators John Heinz and Tim Wirth. Congressman A to Z. We've gained the counsel of groups like Project 88, the Environmental Defense Fund, Harvard's Kennedy School, the business and industrial leaders of the Clean Air Working Group -- and many others.

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[etc. -- the real stuff goes here]

[Rough conclusion:]

For ten years we have struggled to engage a united effort on behalf of clean air. We are now on the edge of a ~~new beginning~~.

1989 could be recorded as the year when business leaders and environmental advocates first worked toward complementary, and not just competing, interests. A year when environmental issues were moved out of the courts -- and onto the national agenda. The moment when leadership, both public and private, mobilized to make environmental protection a growth industry.

Ours is a rare opportunity, to reverse the ~~sins~~ of this generation, in the service of the next. We cannot, must not fail. We must prevail.

Thank you. God Bless you. And God Bless the United States of America.

THE WHITE HOUSE

WASHINGTON

June 7, 1989

MEMORANDUM FOR BILL ROSENBERG
POLLY GAULT
BOB GRADY
KEN YALE
BOB HAHN

FROM: NANCY MALOLEY nam

SUBJECT: Clean Air Act Fact Sheet

This is a **draft** fact sheet that will need to be finalized by Friday evening for the President. Please note that there are some statements in here that will change to reflect whatever decision the President makes, in particular the section on ozone and some of the specifics relating to acid rain.

Please provide comments to me by 3:00 p.m. Thursday. Thanks.

Attachment

c: Roger Porter
Bill Roper

FACT SHEET

CLEAN AIR ACT

Today, President Bush proposed innovative revisions to the Clean Air Act to strengthen the Law's current provisions and to require year-to-year improvements in cleaning up the Nation's air. The Administration's proposal calls for measures to reduce acid rain, urban smog, and air toxics.

The President's proposals are grounded in the belief that every American has the right ~~to~~ of both clean air and ~~to be~~ protection from the ill effects of toxic pollution. The proposals will also protect forests and lakes in both the Northeast and Canada, which have been impacted by acid rain.

The Clean Air Act, first passed in 1970, has achieved significant reduction in air pollution in the face of strong economic growth. Today, we as a country spend about $35 billion annually to control air pollution. Nevertheless, serious problems persist. Over 100 cities including 150 million people are not attaining the health standards for carbon monoxide and ozone. Acid rain is killing lakes and fish in many parts of the country and may be contributing to loss of vegetation in some areas. We know more about risks associated with certain toxic pollutants. Further progress in achieving environmental protection, in the face of continued economic growth and greater use of the automobile requires innovative solutions to meet clean air goals. The President's proposal is a comprehensive approach to break the stalemate which has stalled progress toward clean air for almost ten years.

The President's plan will:

- Reduce by 50 percent (10 million tons) sulfur dioxide emissions that cause acid rain by the year 2000.

- Bring all cities currently not meeting the health standards for ozone and carbon monoxide to attainment. Most cities will attain the standard by 1995, with a goal of achieving attainment in more severe cities by the year 2010 and steady progress up to that time.

- Require industrial sources emitting cancer-causing compounds to achieve a 75 to 90 percent reduction of those compounds, saving over three-fourths of the 1500 to 3000 cancer deaths they are suspected of causing yearly.

Fundamental Principles

The President's proposal is based on 4 points:

- Protection of Public Health. The goal of the legislation is to prevent public exposure to cancer-causing agents and to protect Americans, especially vulnerable populations, such as the elderly, asthmatics and children, who live in cities which don't attain the health standards.

I'm concerned about

See p.11, CO

- Early Reductions and Steady Progress. The proposal establishes realistic timeframes to meet air quality goals, but requires early reductions and steady progress.

LOCAL CONTROLS/ FLEXIB?

- Market Incentives. The proposal calls for the use of marketable permits to achieve acid rain reductions and emissions trading and fuel pooling to achieve reductions from automobile pollution.

- New Technology. The President's proposal encourages development of clean coal technology, alternative fuel systems for automobiles, and other cost-effective innovations.

FIRM DEADLINE 3/ TEETH?

ACID RAIN

"The time for study alone is past. I will ask for a program to cut millions of tons of sulfur dioxide emissions and reduce significant nitrous oxides as well."

October 14, 1988

The President's proposal calls for:

- A reduction of 10 million tons of sulfur dioxide by the year 2000, using a baseline year of 1980 for tons of SO_2 emitted, primarily from coal-fired power plants.

- An extension to the year 2003 for plants adopting clean coal technologies.

* - A first phase reduction of 4 million tons of SO_2 by 1994 (from 1980 baseline levels), or a reduction of 5 million tons of SO_2.

* - A first phase program covering 20 of the Nation's largest utilities, based on a 1.1 pound limit, or 107 plants primarily in the midwest required to meet a 2.5 pound limit.

- o A 2 million ton reduction of NO_x or whatever results from full NO_x/SO_x trading.

- o Maximum flexibility in obtaining reductions through a system of marketable permits to allow utilities to achieve required reductions in the most cost-effective manner. The first phase trading would occur among utilities within a state or within a utility system. Full interstate trading would be allowed in phase II.

- o The estimated cost of the President's proposal would be $3.8 billion annually in the second phase, with first phase costs of ($100 billion or $0.8 to $1.3 billion). These costs are close to half as much as proposals mandating the use of specific technology. Because U.S. emissions, which cause acid rain, travel across international borders and impact Canada, a bilateral accord between the United States and Canada will be negotiated shortly after passage of the legislation.

Americans currently spend $160 billion a year on electricity. The President's proposal is less than 3 percent of that total and would raise utility rates in the affected states only 3-4 percent.

Background

"Acid rain" occurs when sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions undergo a chemical change in the atmosphere and return to the earth.

Approximately 20 million tons of SO_2 are emitted annually in the U.S., three-quarters from the burning of fossil fuels by electric utilities; 20 percent from other, more widely dispersed industrial sources; and 5 percent from transportation sources. The source of most SO_2 emissions causing acid rain are old (pre-1971) electric power plants, not subject to the existing Clean Air Act's strict emissions requirements that regulate plants. The country's 50 largest power plants are responsible for about half of all SO_2 emissions. About 20 million tons of NO_x are emitted per year, with transportation sources accounting for half.

The National Acid Precipitation Assessment Program (NAPAP) is in the process of completing its 10 year mission to study the causes and effects of acid rain. By the time its final report is released in 1990, the government will have invested $500 million to study these important issues.

Since 1970, the U.S. has spent $225 billion to control SO_2 and NO_x. American industry spends about $33 billion a year on these controls ($10 billion by the electric utility industry).

Any acid rain control program will increase electricity rates for affected utilities. Generally speaking, however, proposals with greater flexibility will result in smaller rate increases. Electric rate increases would be most severe in the midwest. Estimates of the increase in the most affected states range from 2 percent to 7 percent. Americans spend over $160 billion per year on electricity. At the most, any acid rain controls currently proposed here and elsewhere would cost less than 5 percent of that total.

AIR TOXICS

"We must act to make continued real progress toward cleaner air."
October 14, 1988

Since 1970, when the Clean Air Act was first passed, EPA has regulated only seven toxic air pollutants. The statute, inherently unworkable and subject to protracted litigation, needs to be revised. EPA estimates approximately 1500-3000 fatal cancers annually from about 80 toxic chemical emissions. They are also responsible for respiratory disease and birth defects. Motor vehicles and stationary sources each account for about half of those emissions.

The President's program will:

- Reduce between 500 and 600 cancer deaths a year by controlling diesel particulate emissions through a proposed diesel particulate standard. A standard in place by 1995 will reduce air toxics risks by 185 cancers per year and 400 cancers by the year 2005.

- Reduce over 200 more cancer deaths through reduction in hydrocarbons from automobile tailpipes.

* - Achieve a 75-90 percent reduction in toxic emissions by requiring major industrial source categories to implement state-of-the-art technological controls (Maximum Achievable Control Technology (MACT) by date _____). Major source categories include electroplating, steel mills and chemicals. EPA will set requirements for 125 source categories. Within 2 years, EPA will set standards for 10 source categories, followed by standards for a quarter of them within five years and half within seven years.

- o Achieves, through MACT controls, an elimination of up to 400-1200 cancer deaths stemming from these compounds.

- o Encourages voluntary reductions early on and credits those reductions against the 75-90 percent MACT requirement.

* o Requires the EPA Administrator to assess any remaining risk after reductions from state-of-the-art technology and determine the need for further controls a) up to a further 90 percent reduction or b) based on unreasonable risk.

Annual costs for this program would be $2.0 billion, absent any residual risk calculations.

Background

Since 1974, EPA has been required to set health-based emission standards for hazardous air pollutants. Section 112 of the Clean Air Act requires EPA to protect public health and the environment "with an ample margin of safety" to ensure protection of the most vulnerable class of individuals (e.g., elderly, children) or species.

Estimates submitted to EPA show that 2.7 billion pounds of toxic chemicals are emitted annually. Approximately 280 toxic compounds were identified that are emitted in quantities that pose some risk. About 80 are carcinogens and are estimated to cause between 1500 and 3000 additional cancer deaths per year, of which 25 percent are caused by large stationary sources, 25 percent by small area-wide sources, and 50 percent by mobile sources. Non-cancer effects have not been quantified but would include reproductive and birth defects and neurotoxicity.

A majority of the number of identified carcinogens is emitted by about 30 industrial categories, including steel mills (coke ovens), rubber, pulp and paper, chromium electroplating, electric utility cooling towers, and solvent users. However, almost 75 percent of the total pounds of toxic pollution emitted are volatile organic compounds (VOCs) which are principally emitted from automobiles and smaller area sources such as gasoline stations and dry cleaners.

The current law is unwieldy, fraught with contradictions, and provides such little regulatory discretion that it is impossible to administer. The statutory requirement to "protect the public health with an ample margin of safety" is inherently unworkable for carcinogens. There simply is no identifiable threshold at which carcinogens pose no health risk. Yet a zero emission

requirement is tantamount to shutting down many of the largest and most vital U.S. industries.

As a result, over the past 15 years since enactment of Section 112 of the Act, EPA has promulgated only seven regulations controlling toxic air pollutants. Further, attempts by EPA to balance risk reductions with economic and even technical feasibility were undermined by a recent (1987) D.C. Appeals Court decision. The Court ruled that a safe level must be met without regard to costs or technical feasibility of the controls required. Meeting the test would obviously shut down or severely disrupt many industries. Under current law, plants must comply within 90 days of promulgation and can receive a one-time extension for only two years if it is technically (as opposed to economically) infeasible to comply.

NON-ATTAINMENT

"Despite good progress in reducing emissions from cars, factories, and power plants, more than 100 cities still do not meet federal clean air standards.

"Urban ozone is one of the most complex and difficult environmental issues facing this country...To really tackle this problem, will affect the way we work, live and play..."

Scripps Institution, October 14, 1988

Urban air quality focuses on three pollutants of concern: ground-level ozone, carbon monoxide, and particulates. The most widespread problems are caused by ozone.

OZONE

Over 100 million people live in 81 cities across the country which exceed the health standard for ozone. The current control program of tailpipe emission standards, inspection and maintenance, volatility controls, and some stationary source controls is not nearly enough to bring these areas into attainment, despite the good faith attempts to meet the air quality standard. Because of an estimated increase in vehicle miles travelled of between 40 percent and 60 percent and additional growth by 2005, the current program will bring only 9 of the 81 cities into attainment.

In an ambitious effort to reduce urban smog and ensure all cities are meeting the clean air standard, the President's proposal will:

- Set reasonable goals to achieve the air quality standards, but, in return, require a demonstration of annual progress toward attaining the standard.

Moderate areas will have until 1995 to comply; serious areas until 2000; and severe areas until 2010.

- o Require a 45 percent reduction overall in current levels of volatile organic compounds beyond an expected 18 percent reduction from the current program through additional stationary and mobile source controls and cleaner gasoline.

Cleaner Gasoline

	VOC Reduction
o Reduce emissions of ozone precursors by further tightening the volatility requirements for gasoline nationwide during the summer months.	8%
o Require recovery of gasoline vapors through controls at the pump.	1.5%
o Reduce vehicle evaporative emissions caused by automobile running losses.	4.2%

Improved Vehicle Emission Controls

o Reduce emission levels of hydrocarbons (HC) and oxides of nitrogen (NO_x) from the tailpipes of new cars to the level now required on California vehicles from .41 to .25 gpm.	.4%
o Require light duty trucks to meet the same standard now required of automobiles (.41).	.2%
o Requires states to expand and improve vehicle inspection and maintenance programs in serious non-attainment areas.	1.2%
o Extended useful life requirements for emissions control devices from 50,000 miles to 100,000 miles.	1.0%

Control of Other sources of Emissions

o Issue Federal regulations to be implemented by states to control damaging emissions from municipal landfills and barge loading.	3.2%

- Provide the authority to study and, if necessary, regulate VOC emissions from small sources such as consumer solvents and paints. — 2.5%

- Provide EPA guidelines for industry and businesses to use in controlling existing major emitters. The most cost-effective control guidelines will be issued first. — 3.5%

Neat Fuels Program

- Mandate sales of neat fuels in 9 serious non-attainment areas (with design values above .18) to reach 1,000,000 cars by the year 2000. — 1.7%

Taken together, these controls represent a 45 percent reduction and would still leave 18 to 23 cities out of attainment. States remaining out of attainment with the ozone standard after implementing the Federal measures must achieve a 3 percent annual reduction in VOC emissions to assure steady progress toward meeting the health-based ozone standard.

The Long-Term Clean Fuels Program

"One of my priorities as Vice President has been to lead the search for alternative fuels -- so called ±clean fuels,± such as methanol made from remote natural gas and ethanol made from grain, and to promote their use."

October 14, 1988

The Administration proposes to replace a portion of the gasoline fleet in certain cities with new vehicles that operate on clean burning fuels. This will be a bold, cost-effective strategy for significantly reducing the automobile's contribution to ozone pollution.

The program will:

- Foster the production and sale of clean alternative fuels and vehicles beginning in 1995.

- Achieve the introduction of one million alternative fueled vehicles per year (approximately 8 percent of total vehicle sales), and the general availability of clean fuels in the cities where the vehicles are to be sold and used under the following schedule:

500,000 vehicles in 1995
750,000 vehicles in 1996
1,000,000 vehicles in 1997 and thereafter

- The initial program will require that a percentage of the motor vehicles sold in the following metropolitan areas beginning in 1995 be capable of operating on alternative clean fuels. These cities have recorded the worst ozone levels: Los Angeles, Houston, New York City, Milwaukee, Baltimore, Philadelphia, Greater Connecticut, San Diego, Chicago.

- Other cities may be included in the program at their request. Also, a city included in the above list may be allowed to opt out if it can develop a substitute emission control program that EPA determines will provide equal or greater long-term environmental benefits compared to this clean fuels program.

- It is likely that in the first few years of the program, flexible-fuel vehicles will be sold. After a transition phase, vehicles which are designed to use only pure alternative fuels will be available. These "optimized" vehicles will not only provide much greater environmental benefits, but may also have superior performance compared to gasoline-powered vehicles.

- To permit optimized vehicles to be operated outside the metropolitan areas, the EPA Administrator may require alternative fuel availability in major nationwide transportation corridors.

- In addition to the program described above which affects vehicle sales to the general public, a separate program will be implemented which will begin to replace diesel-powered urban transit buses with clean buses beginning in 1991. By 1994 all new urban buses must be clean alternative fueled.

The long Term Clean Fuels Program is designed to reconcile the ever-increasing use of the automobile with national environmental concerns. The program will achieve significant reductions in the overall emissions of toxic air pollutants from aromatics. The Long Term Clean Fuels Program, in combination with the other motor vehicle emission controls proposed here, will shrink the contribution of vehicles to the ozone problem from the current 40 percent to about 10 percent in the next century. Adoption of this program will provide an alternative to other, more disruptive emission control measures, such as mandatory driving reductions.

Background

The Clean Air Act requires attainment of air quality standards (NAAQS) that protect public health with an adequate margin of safety. The Clean Air Act assumes that all cities would have attained the ozone and carbon monoxide standards no later than 1987, and gives no guidance on how Federal, State and local governments should respond to post-1987 non-attainment. This has left the Federal government vulnerable to lawsuits that can force EPA to take over State and local responsibilities by developing Federal implementation plans (FIPS) to attain the standard. Legal actions of this sort are already underway in various parts of the country and more are likely.

The current ozone standard is 0.12 parts per million (ppm) over a one-hour period. Ozone is suspected of playing a role in the long-term development of chronic lung diseases, permanent lung structure damage, and in initiating asthma attacks.

In addition to health effects, ozone has "welfare" effects on vegetation, including crops such as soybeans, wheat and corn; is damaging forests in southern California; and is suspected as a contributing agent in damage to forests in the Southeastern U.S.

Unlike other NAAQS pollutants, ozone -- the major component of urban smog -- is not emitted directly. Instead, it is formed when volatile organic compounds (VOCs) are mixed with nitrogen oxides (NO_x) in the presence of sunlight. Heat speeds up the reaction, and therefore concentrations are usually higher in the summer months. Areas with hotter climates, such as Los Angeles and Houston, are especially susceptible to ozone problems.

The major sources of VOCs are motor vehicles (40%); small "area sources," e.g., bakeries, dry cleaners, and consumer solvents (40%); large point sources, e.g., petroleum refineries (15%); and gasoline refueling (5%). Many large point sources have already been required to reduce emissions by roughly 80 percent from uncontrolled levels under the Clean Air Act, and tailpipe emissions from new vehicles have been reduced by 90 percent. The smaller "area" sources are largely uncontrolled.

VOC and NO_x emissions have decreased nationally since 1978 -- VOCs by 17 percent and NO_x by 8 percent -- despite growth in population, travel and industrial activity. As a consequence, the trend in ambient ozone concentrations was actually down by 9 percent from 1979 to 1987. Increases did occur in 1987 and 1988, although it should be noted that those increases occurred in years with abnormally high summer temperatures.

Over the next decade both EPA and the Federal Highway Administration estimate that VMT will begin to outpace fleet turnover and that VOC emissions will increase after 2000. EPA

projects a 60 percent increase in VMT by 2005, although the Federal Highway Administration expects a lesser 40 percent increase.

Based on 1988 data, 81 cities with an aggregate population of 100 million people are in non-attainment for ozone.

The degree to which urban areas do not attain the standard varies dramatically, from Los Angeles with readings 200 percent above the standard and exceedances 140 days of the year, to Kansas City which exceeded the standard four times in a two-year period. Los Angeles is a special case -- it has four times the number of exceedances of any other city in America.

EPA estimates that requiring certain Federal control measures beyond the base program would cost about $3-4 billion per year beginning in the early 1990s. With those controls, 18-23 cities will still remain out of attainment. In order to bring those cities into attainment, according to EPA, a 3 percent annual requirement would cost an additional $5-9 billion per year beginning in the late 1990s, resulting in a total additional cost above the current program of $8 to $13 billion annually in order to bring all cities into attainment.

NON-ATTAINMENT

CO

There are 52 areas not meeting the standard for CO. Ninety percent of CO emissions come from mobile sources. CO can be a serious health threat to people with heart or circulatory disease. It also impairs learning ability in children.

About half of the areas will reach the standard through fleet turnover. To bring the remaining areas into attainment, the President's program will:

- Require clean burning oxygenated fuels to be blended with gasoline and sold during winter months in serious CO non-attainment areas. Cities specifically targeted would be _____, _____.

- Require EPA, within 12 months, to issue regulations requiring light duty trucks to meet a 3.4 grams per mile standard by 1992, reducing CO emissions about 2 percent.

- Require EPA to issue regulations within 12 months for a CO cold temperature standard, reducing CO 7 to 12 percent.

- o Extend useful life provisions from 5 years or 50,000 miles for certification of emissions control devices to 10 years or 100,000 miles, reducing CO up to 10 percent.

- o REquire enhanced inspection and maintenance programs for CO non-attainment areas with a population over 200,000 and CO design values about twice as high as allowed by the standard. This would reduce CO emissions 4 or 5 percent.

Background

Carbon monoxide is a colorless, odorless gas that tends to reduce the oxygen carrying capacity of the blood. It is a particularly serious health threat to individuals who suffer from cardiovascular disease, especially those with angina or heart disease. There is limited information, derived from animal studies, suggesting that CO may adversely affect development of the fetus.

Two-thirds of CO emissions come from mobile sources. The carbon monoxide standard is 9 ppm measured over an 8-hour period, based on the second maximum 8-hour period in one year. If an area exceeds the standard for two or more 8-hour periods, it is classified non-attainment. Fifteen of the 50 carbon monoxide non-attainment areas are moderately out of attainment. An additional 6 are seriously out of attainment.

Emissions of carbon monoxide decreased 25 percent from 1978 to 1987 largely due to reductions in mobile sources emissions, despite a 24 percent increase in vehicle miles travelled in the last 10 years. Some improvement from controls on automobiles will continue, due to fleet turnover. For example, cars purchased before 1981 amount to only 38 percent of the vehicles miles traveled (VMT), but they account for over 86 percent of CO emissions.

This improvement is expected to level off in the 1992, however, because EPA projects continuing sharp increases in VMT. EPA estimates that VMT nationwide will grow 51 percent by the year 2000.

Initial EPA estimates project an additional 24 percent reduction in total CO emissions by the year 2005 due to fleet turnover under the current program after taking increased VMT into account. EPa estimates that this will bring 24 of the 51 non-attainment areas into attainment with the CO standard.

PARTICULATE MATTER

The particulate matter (PM10) standards were revised in 1987 to address smaller particulate matter particles most likely to penetrate the lungs. (The standard up to that time covered only larger particles.) There are no provisions in the Clean Air Act to address PM10.

Approximately 70 areas of the country (60 million people) do not meet the PM10 air quality standards.

The President's program will:

- Require reasonably available control measures to meet the standard.
- Attainment deadlines of 1994 and 2001 for moderate and serious areas, respectively.

Background

Particulate matter (PM10) includes acid sulfates, toxic organics and metals, and insoluble dusts that come from traditional stack emissions, as well as area sources such as wood stoves and open burning. Construction, roadways and mobile sources also contribute.

PM10 can cause premature death in elderly and ill persons, aggravation of existing respiratory disease, increased respiratory illness and effects from toxic components of particulate matter.

PM10 also contributes to visibility impairment, soiling and nuisance.

Clean Air Working Group

- Automobile Manufacturers
- U.S. Chamber of Commerce
- Business Roundtable
- NAM
- Chemical Manufacturers assoc.
- Steel manufacturers

To: Mark Lange
White House Office of Comm.

from: Dave Greenberg
EPA

History

FACT SHEET: BACKGROUND ON THE CLEAN AIR ACT

- In 1970, Congress passed and President Nixon signed the Clean Air Act, which established the basic framework for national air pollution control.

- The 1970 Clean Air Act established national ambient air quality standards; state plans for attainment of the standards by 1975; national standards for new sources and for hazardous air pollutants; and tighter tailpipe emissions standards for automobiles and other mobile sources.

- Congress passed major amendments to the Act in 1977. These amendments extended the attainment deadlines to 1982 for some areas and pollutants, and to 1987 for others. The 1977 Amendments also established new planning and control requirements for areas that did not attain the standards, new emissions standards for automobiles, changes in emissions standards for new power plants, and requirements for new and modified stationary sources located in clean air areas.

- No comprehensive amendments to the Act have been passed since 1977. As a result, all of the Act's deadlines have now expired, yet many areas still have not attained the clean air standards.

- Since 1970, Federal, State and local governments have made substantial progress in reducing air pollution in the United States. Air quality has improved for many pollutants. Since 1978, lead concentrations have decreased by 88%, sulfur dioxide by 35%, particulate matter by 21%, and carbon monoxide by 35%.

- However, much remains to be done. Concentrations of ground-level ozone (smog) have decreased little in the last ten years, and 1988 was one of the worst years of the decade. Over 130 million Americans live in urban areas which do not attain the standards.

- Businesses and consumers spend about $30 billion per year to comply with the requirements of the Clean Air Act. In fiscal year 1989, EPA will spend about $150 million on standard setting, enforcement, technical support, and research on air pollution control, and an additional $100 million on grants to State and local air pollution control agencies.

TO: Mark Lange

FROM: Rett Wallace

Good Quotes and stats from U.S. NEWS JUNE 12, 1989

-- 140 million Americans, nearly 3 out of 5, now live in areas that do not meet the health standards set by the Clean Air Act of 1970.

-- Last summer, rangers in Maine's Acadia National Park recorded ozone levels so high they would have triggered a smog alert in Los Angeles, smog capital of the nation.

-- The same acids that kill of fish in Eastern lakes and streams harm people.

-- Ironically, it is the atmosphere's own self-cleaning mechanism that produces the pollution known as acid rain.

-- Near Los Angeles, the fog sometimes is as acidic as Lemon juice.

-- The problem is that industrial society's inexorably growing use of cheap, plentiful coal to produce electric power has overloaded nature's cleansing cycle. As a result, one fifth of the lakes in New York's Adirondack Mountains have grown too acidic to support fish, and half the streams in the mid-Atlantic coastal states are endangered. Spruces, Maples and Pines in California and Appalachia absorb the acids through the needles, leaves and roots, and are now suffering from what the Germans ~~poetically call~~ Waldsterben -- forest death.

-- Delay of instalation of scrubbers (desulfurization gear) in coal burning plants saves the industry as much as $5 billion a year.

-- If other urban areas had enforced the same clean-air measures Los Angeles has adopted already, ... Los Angeles itself -- the victim of a geography that traps pollutants in abundant sunshine -- would be the only city in the country that is not in compliance with the existing Federal health standards.

5/1 Meet - Grady, Porter, Gray, Haleby

Grady: INNOVATIONS

① MKT INCENTS - letting mkt drive creative, decision

② Alt. fuels - pioneered at V.P → INT'L: OPPORTUNITY TO LEAD

Grady:

OZONE NO_x

AM - 20 min, clean air

PM -
1/3 Clean Air in greater depth
2/3 Loose agenda

Ducks - general ("Novens")
viewpoint: OK Monday & will announce

moved to Monday

{15 min.}

Baskin re: Trading

THE WHITE HOUSE
WASHINGTON

CABINET AFFAIRS STAFFING MEMORANDUM

Date: May 22, 1989 **Number:** 490,802 **Due By:** _____

Subject: Domestic Policy Council Meeting #11: Wednesday, May 24, 1989 2:00 PM, Roosevelt Room, Re: Non-Attainment of Air Quality Standards.

	Action	FYI
ALL CABINET MEMBERS	☐	☐
Vice President	☑	☐
State	☑	☐
Treasury	☐	☑
Defense	☑	☐
Justice	☑	☐
Interior	☑	☐
Agriculture	☑	☐
Commerce	☑	☐
Labor	☑	☐
HHS	☑	☐
HUD	☑	☐
Transportation	☑	☐
Energy	☑	☐
Education	☑	☐
Veterans	☑	☐
OMB	☑	☐
USTR	☑	☐
Chief of Staff	☑	☐
UN	☐	☐
CIA	☐	☐
National Drug Policy	☐	☐
EPA	☑	☐
GSA	☐	☐
NASA	☐	☐
OPM	☐	☐
SBA	☐	☐

	Action	FYI
CEA	☑	☐
CEQ	☐	☐
OSTP	☑	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
Scowcroft	☑	☐
Porter	☑	☐
Breeden	☑	☐
Cicconi *(For WH Staffing)*	☑	☐
BATES	☑	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
Executive Secretary for:		
DPC	☐	☐
EPC	☐	☑
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REMARKS: Attached are an agenda and discussion paper on the subject of Clean Air (Non-Attainment). Administrator Reilly will present the paper at the DPC meeting on Wed., May 24, 1989 at 2:00 PM in the Roosevelt Room. Please note that this is a CLOSE HOLD DOCUMENT, and no copies should be made.

It is requested that you phone Justine (456-2800) by COB, TUESDAY, MAY 23, as to whether or not you will attend the meeting.

RETURN TO:

☐ **David Q. Bates**
Cabinet Secretary
456-2174
(1st Floor, West Wing)

☐ **Associate Director**
Office of Cabinet Affairs
456-2800
(Room 235, OEOB)

THE WHITE HOUSE

WASHINGTON

May 22, 1989

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: KEN YALE
Executive Secretary

SUBJECT: Eleventh Meeting of the Domestic Policy Council, Wednesday, May 24, 1989

The Domestic Policy Council will hold its eleventh meeting, on Wednesday, May 24, 1989 at 2:00 P.M. in the Roosevelt Room on the subject of Clean Air (Non-Attainment). An agenda, along with a copy of the discussion paper, are attached for your information.

Please note that the attached paper should be treated as a "CLOSE HOLD DOCUMENT", and no additional copies should be made.

Administrator Reilly of the Environmental Protection Agency will make a presentation on Non-Attainment, after which a discussion will follow.

Please phone Justine D'Andrea (456-2800) by C.O.B. TUESDAY, MAY 23, as to whether or not you will attend the meeting.

Attachments

THE WHITE HOUSE

WASHINGTON

DOMESTIC POLICY COUNCIL

Wednesday, May 24, 1989

2:00 P.M.

Roosevelt Room

AGENDA

1. Non-Attainment of Air Quality Standards

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CLEAN AIR ACT OPTIONS PAPER: OZONE NONATTAINMENT

I. BACKGROUND

The Clean Air Act requires attainment of air quality standards (NAAQS) that protect public health with an adequate margin of safety. The Act assumes that all cities would have attained the ozone and carbon monoxide standards no later than 1987, and gives no guidance on how Federal, State and local governments should respond to post-1987 nonattainment. This has left the Federal Government vulnerable to lawsuits that can force EPA to take over State and local responsibilities by developing Federal implementation plans (FIPS) to attain the standard. Legal actions of this sort are already underway in various parts of the country and more are likely.

Congress has attempted to enact a nonattainment bill for the past several years. All Congressional proposals would have extended attainment deadlines. However, these bills would also have required nonattainment areas to implement a variety of control measures -- some expensive and potentially requiring major lifestyle changes -- in return for extension of the deadlines.

Because of the controversial nature of the control measure requirements, none of the proposals has ever moved close to enactment. Last year's Senate bill (S. 1894), sponsored by Sen. Mitchell, is the most stringent bill. It included tight deadlines, the most stringent control measures, and the largest number of Federally mandated controls. On the House side, the Waxman bill (H.R. 3054) was similar to the Mitchell bill in stringency, but was marginally less costly and less prescriptive. The "Group of Nine" Democrats in the House proposed a still more moderate bill with longer deadlines, lower cost, and fewer Federally mandated control measures than either Mitchell or Waxman.

Formation of ozone

Unlike other NAAQS pollutants, ozone -- the major component of urban smog -- is not emitted directly. Instead, it is formed when volatile organic compounds (VOCs) are mixed with nitrogen oxides (NOx) in the presence of sunlight. Heat speeds up the reaction, and therefore concentrations are usually higher in the summer months. Areas with hotter climates, such as Los Angeles and Houston, are especially susceptible to ozone problems.

EPA's ozone control strategy focuses on VOCs. NOx controls generally reduce ozone but can increase its formation in certain situations. Since

ozone reacts upon contact with surfaces, ozone exposure is not a problem indoors.

Sources of VOCs

The major sources of VOCs are motor vehicles (40%); small "area sources", e.g., bakeries, dry cleaners, and consumer solvents (40%); large point sources, e.g., petroleum refineries (15%); and gasoline refueling (5%). Many large point sources have already been required to reduce emissions by roughly 80% from uncontrolled levels under the Clean Air Act, and tailpipe emissions from new vehicles have been reduced by 90%. The smaller "area" sources are largely uncontrolled.

Trends in emissions and ambient levels

VOC and NOx emissions have decreased nationally since 1978 --VOCs by 17 percent and NOx by 8 percent -- despite growth in population, travel, and industrial activity. As a consequence, the trend in ambient ozone concentrations was actually down by 9 percent from 1979 to 1987. Increases did occur in 1987 and 1988, although it should be noted that those increases occurred in years with abnormally high summer temperatures.

The downward trend in VOC emissions is largely due to growth in the share of newer, more stringently controlled vehicles in the vehicle fleet. These "fleet turnover" reductions have been achieved despite a 25% growth in vehicle miles travelled (VMT). Over the next decade, however, both EPA and the Federal Highway Administration estimate that VMT will begin to outpace fleet turnover and that VOC emissions will increase after 2000. EPA projects a 60 percent increase in VMT by 2005, although the Federal Highway Administration expects a lesser 40% increase.

Effects

The current ozone standard is 0.12 parts per million (ppm) over a one-hour period. The health-based standard is designed to protect healthy exercising individuals from acute respiratory symptoms (coughing, chest pain, shortness of breath) that are usually temporary and reversible. Ozone is also suspected of playing a role in the long-term development of chronic lung diseases, permanent lung structure damage, and in initiating asthma attacks. EPA's Clean Air Science Advisory Committee is currently debating whether the standard should be *tightened* to create a more appropriate margin of safety, based on chronic effects. The Committee is unanimous that the standard should not be relaxed.

In addition to health effects, ozone has "welfare" effects on vegetation, including crops such as soybeans, wheat, and corn; is damaging forests in southern California; and is suspected as a contributing agent in damage to forests in the Southeastern U.S.

Nonattainment

An area is classified as being in nonattainment if the 0.12 ppm standard is exceeded at the highest reading monitor more than three hours on separate days over a consecutive three-year period. The so-called "design value" is the fourth-highest reading over a running three-year period. The design value reading is frequently used as a proxy for the severity of the ozone problem in an area. It is also the primary basis for categorizing areas according to severity in Congressional bills.

Based on 1988 data, 81 cities, with an aggregate population of 100 million people, are in nonattainment for ozone. While individuals usually are exposed to levels that exceed the standard only a small percentage of the time, over 30 cities exceeded the standard 10 or more days in the hot summer of 1988.

The degree to which urban areas do not attain the standard varies dramatically, from Los Angeles with readings 200 percent above the standard and exceedances 140 days of the year, to Kansas City which exceeded the standard four times in a two-year period. Los Angeles is a special case -- it has four times the number of exceedances of any other city in America. Appendix A shows the 1987 design values and the number of exceedances for nonattainment areas.

Chart 1 shows the number of cities that will remain out of attainment (absent additional State control measures) for different levels of VOC reductions beyond the current program.

Chart 1

Number of Non-Attainment Areas Remaining After Applying Additional Control Measures

	1995	2000	2005
Current Program	58	58	72
+15%	32	33	51
+20%	26	26	32
+25%	14	18	26
+30%	9	10	14
+35%	4	4	9
+40%	2	2	4

NOTE: Projections are very sensitive to vehicle miles travel (VMT) projections, which vary widely.

Benefits of VOC reductions

EPA has evaluated health benefit categories for which it could value the effects in the Northeast. These categories include primarily short-term respiratory effects. They do not include the more serious categories such as potential long-term chronic effects and structural changes in lung function. This evaluation indicates that the value of these limited categories ranges up to $2600/ton with a "best guess" point estimate of $480 per ton. This does not include additional benefits that would be gained by reductions in air toxics from mobile sources, which are estimated to range up to $750/ton. Recent estimates are that the economic consequences of ozone effects on crops approach $2 billion per year. This does include damage to forests or materials.

Costs of VOC reductions

EPA's current vehicle tailpipe standards, along with State vehicle inspection/maintenance programs and other State control measures, will reduce VOC emissions by about 9% in 2005, net of growth. One analysis done for EPA estimates that these measures will add about $7 billion in annual costs to the economy by the year 2000.

EPA estimates that requiring certain Federal control measures that together achieve a 29% reduction in VOC emissions (38% including current gasoline volatility controls) beyond the base program would cost about $3-4 billion per year beginning in the early 1990s. According to EPA, reductions beyond this amount -- which the Agency proposes to achieve through a requirement for 3% annual VOC reductions -- would cost an additional $5-9 billion per year beginning in the late 1990s, resulting in a total additional cost above the current program of **$8 to $13 billion annually** in order to bring all cities into attainment. Estimates by other sources of the cost of achieving attainment are even higher. This is due to higher estimates of the cost of specific control measures and to the assumption of higher costs for additional, unidentified controls that States would have to develop and implement to reach attainment.

Current program

Federally mandated ozone control measures already in place include: vehicle tailpipe emission controls; gasoline volatility restrictions (Phase I); vehicle inspection & maintenance programs for certain nonattainment areas; emission limits for various VOC source categories; and State controls on existing stationary sources for which EPA has issued "Control Technology Guidelines" (CTGs).

State Implementation Plans (SIPs) also already include additional controls measures developed and implemented by the States in order to demonstrate attainment. For example, areas with relatively severe ozone problems may include controls on stationary sources of VOCs not covered by Control Technology Guidelines.

EPA also has several regulations under development that will further reduce VOC emissions: vehicle evaporative emission controls; light duty truck emission standards; hazardous waste facility air emissions regulations; vehicle refueling controls and additional gasoline volatility restrictions (Phase II).

Additional measures

Based on EPA's estimates of VOC emissions, VMT growth, and stationary source growth, the current and proposed measures discussed above will not be sufficient to bring all areas into attainment by 2005. Together, these measures are expected to achieve a percentage reduction in VOC emissions of about 29 percent (above and beyond the 18 percent reduction from base programs already underway or planned under current law). Eighteen of the areas will need percentage reductions beyond the base program of more than 29 percent to achieve attainment in 2005 and the four areas with the worst ozone problems will need to achieve reductions of 50% or greater.

Potential measures for achieving attainment in those areas needing controls beyond current and proposed measures can be divided into three categories: 1) nationwide controls Federally mandated, 2) nonattainment area controls Federally mandated, and 3) nonattainment area controls developed by the States through SIPs.

While one way to achieve attainment might be to simply extend attainment deadlines and let States develop and implement all additional controls measures, this approach has several drawbacks. First, many States have failed thus far to implement the measures committed to in SIPs because of their cost and/or disruption of lifestyles. Second, several control measures with the potential to achieve large, relatively cost-effective reductions are more appropriately implemented at the national level.

Some also argue that additional controls should include Federally mandated requirements specifically for nonattainment areas. While controls in this category would limit State discretion in designing control measures and would risk over-control for some nonattainment areas, such controls would provide a better guarantee (recognizing previous experience) of progress toward attainment. To correct for the problems inherent in mandating State action, some have suggested that States be allowed to "opt out" of Federally mandated measures if they can demonstrate that a substitute measure would achieve at least the same VOC reduction.

Finally, even if every control measure discussed within the working group were included as part of the Administration proposal, the percentage reduction achieved would still not be sufficient to bring all areas into attainment. Those nonattainment areas requiring over 29 percent reductions in VOCs by 2005 beyond the base program would still need to develop and implement additional control measures. Such

measures might include restrictions beyond Federal emission limits on new sources, tighter restrictions on existing stationary sources, tighter enforcement of existing regulations, transportation control measures designed to reduce VMT and market based strategies.

Nationwide control measures

Nationwide control measures would affect both areas in and out of attainment. If a neat fuels program is included in serious and severe nonattainment areas, the percentage reductions achieved in these areas by the other mobile source measures on the list will decrease, and vice versa.

The table below provides estimates of the cost-effectiveness and percentage reductions achieved by potential nationwide measures. Some of the percentage reductions would be smaller if a neat fuels program is included. ***Those proposals which sparked considerable discussion in the working group are marked by asterisks. Separate discussion papers on these subjects follow.***

	% VOC Reduction	2005 Cost Effectiveness $/Ton	Nationwide Annual Costs ($M)
1.* Onboard Controls	2.6	0 - 2,500	0 - 1,500

Would require automobile manufacturers to put canisters on every vehicle to prevent refueling emissions. The same refueling emissions could also be captured by Stage II controls installed at service stations only in nonattainment areas. (See next page.)

2.* Extended Useful Life	1.0	525	130

EPA would promulgate regulations extending the design life of emission control devices from 50,000 to 100,000 miles. State/local governments in-use testing/inspection of vehicles for compliance would cease after 75,000 miles and the manufacturer's warranty would continue for 50,000 miles as currently required.

3. Light Duty Truck Emissions	0.2	650	33

Requires light duty trucks (e.g., pickups, mini-vans) to meet the same 0.41 grams per mile (gpm) standard currently being met by automobiles. Heavier trucks would have to meet a 0.50 gpm standard. Although small reductions are obtained, the growth in small trucks as a substitute for automobiles is expected to continue and on equity grounds alone similar emission standards should be met.

4. Commercial/consumer Products	2.5	0 -2,000	640

EPA would be authorized to regulate VOC emissions from a variety of smaller sources such as consumer solvents, paints, barge loading and municipal landfills. This would be a new Clean Air Act authority for EPA.

5. Automotive Tailpipe Controls	0.4	1,200	114

EPA would promulgate a regulation to tighten the VOC emission standard to the level currently required on all California vehicles (from .41 to .25 grams per mile). This represents a 98% reduction from uncontrolled levels, and a 2% reduction beyond current tailpipe standards.

Federally Mandated Control Measures for Nonattainment Areas Only

Below is a list of Federal mandates which States could be required to implement unless they could demonstrate alternative local measures with commensurate VOC reductions.

	% VOC Reduction	2005 Cost Effectiveness $/Ton	Nationwide Annual Costs ($M)
1.* Neat Fuels Programs	7.4 *(2005)*	390 - 11,000	244
EPA Proposal - 50%	12.4 *(2010)*	390 - 11,000	N/A
With Other Measures	1.7 *(2005)*	1,200 - 11,000	244
	4.2 *(2010)*	1,200 - 11,000	N/A

One option would require that, beginning in 1995, 50% of all vehicles in severe and serious nonattainment areas use neat fuels (methanol, ethanol, compressed natural gas) and that service stations provide neat fuels in these areas at prices competitive with gasoline. Another option would require neat fuels only for urban buses and centrally fuelled fleets of 10 or more vehicles. The figures above are for the former option.

2.* Stage II Controls	1.5	450 - 1,000	60 - 135

Would require service stations in nonattainment areas to install special nozzles to prevent refueling emissions. The same refueling emissions could also be captured by onboard controls imposed on vehicles nationwide.

3. Control Technology Guidelines (CTGs)	3.5	0 - 2,000	430

EPA would issue, subject to the normal regulatory review process, stationary source guidelines for states to use in controlling existing major emitters in nonattainment areas. EPA would issue the most cost-effective CTG's first so that states will always be assured that least-cost control strategies are being implemented.

4.* Enhanced I/M	1.2	1,200	90

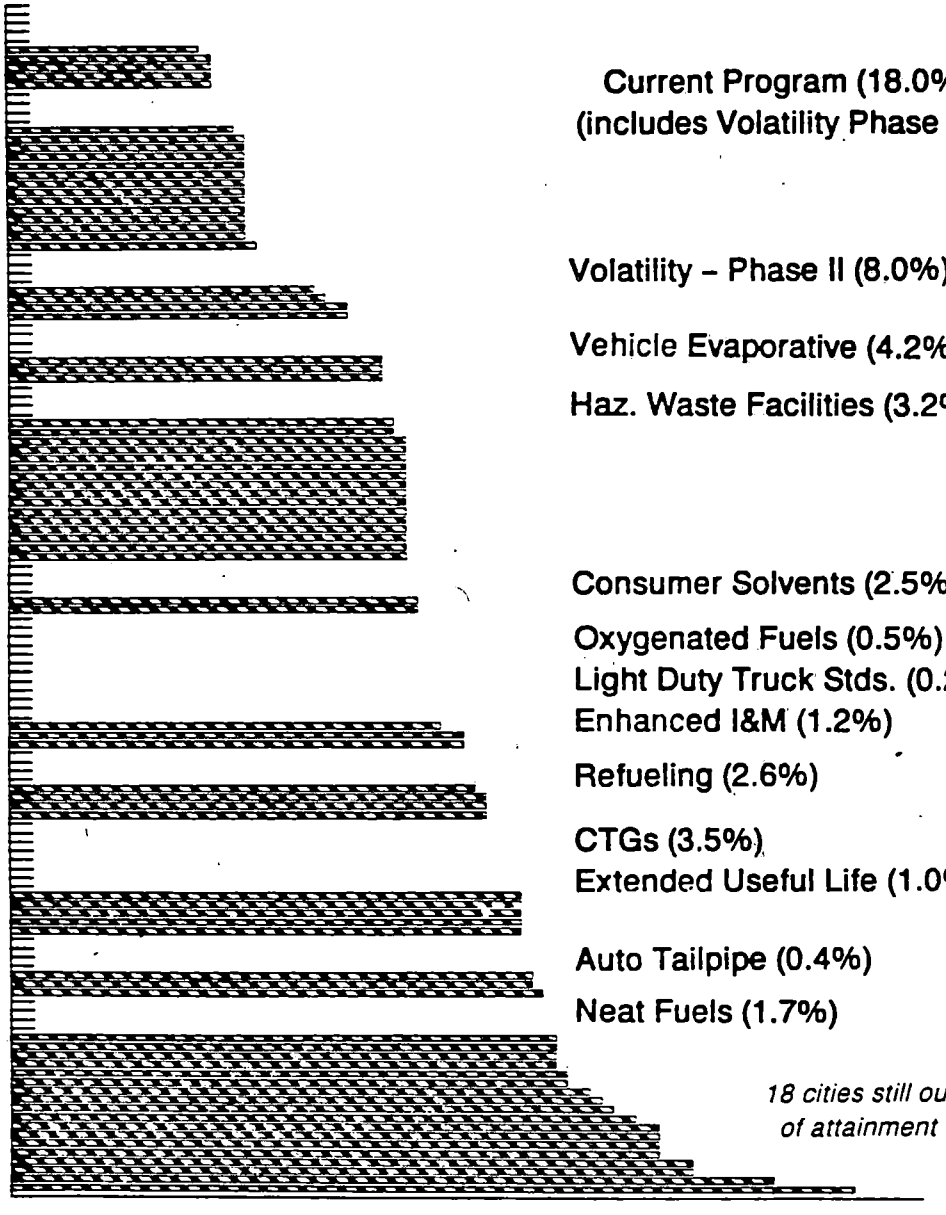
EPA would mandate that states improve and expand their inspection programs in non-attainment areas. This would include increasing the stringency of inspections and requiring added tampering and fuel switching checks to existing programs.

Graph 1 (below) shows the number of cities brought into attainment by individual control measures.

Graph 1

EFFECT OF VOC CONTROL MEASURES ON # OF CITIES BROUGHT INTO ATTAINMENT IN 2005

This chart shows how many cities will be brought into attainment by achieving incremental reductions of VOCs; the reductions could be achieved by the kinds of measures listed.



	Cum. VOC % Reduction	Cities Remaining Out of Attainment
Current Program (18.0%) (includes Volatility Phase I)	(18.0)	72
	Cum. Reductions Beyond Current Program	
Volatility – Phase II (8.0%)	8.0	58
Vehicle Evaporative (4.2%)	12.2	54
Haz. Waste Facilities (3.2%)	15.4	51
Consumer Solvents (2.5%)	17.9	35
Oxygenated Fuels (0.5%)	18.4	33
Light Duty Truck Stds. (0.2%)	18.6	33
Enhanced I&M (1.2%)	19.8	33
Refueling (2.6%)	22.4	30
CTGs (3.5%)	25.9	26
Extended Useful Life (1.0%)	26.9	26
Auto Tailpipe (0.4%)	27.3	21
Neat Fuels (1.7%)	29.0	18

CLEAN AIR ACT OPTIONS PAPER: CARBON MONOXIDE NONATTAINMENT

CARBON MONOXIDE

I. BACKGROUND

The second major air quality "non-attainment" issue is carbon monoxide (CO).

There are currently 52 areas out of attainment with the EPA's carbon monoxide standard. The CO non-attainment situation, however, is much less intractable than the ozone non-attainment situation since ongoing EPA programs under the Clean Air Act will help reduce CO emissions over the next decade.

Carbon monoxide is a colorless, odorless gas that tends to reduce the oxygen carrying capacity of the blood. It is a particularly serious health threat to individuals who suffer from cardiovascular disease, especially those with angina or heart disease. There is limited information, derived from animal studies, suggesting that CO may adversely affect development of the fetus.

Unlike VOC emissions which come from a wide range of sources, two-thirds of CO emissions come from mobile sources. Other major sources of CO are industrial processes and wood stoves.

The carbon monoxide standard is nine ppm measured over an eight-hour period, based on the second maximum eight-hour period in one year. If an area exceeds the standard for two or more eight-hour periods, it is classified non-attainment. Fifteen of the 50 carbon monoxide non-attainment areas are moderately out of attainment. An additional six are seriously out of attainment.

Carbon monoxide ambient levels decreased 32 percent from 1978 to 1987 and the number of eight-hour exceedances decreased by 91 percent during that same period.

Emissions of carbon monoxide decreased 25 percent from 1978 to 1987 largely due to reductions in mobile sources emissions, despite a 24 percent increase in vehicle miles traveled in the last 10 years. Some improvement from controls on automobiles will continue, due to fleet turn-over. For example, cars purchased before 1981 amount to only 38 percent of the vehicles miles traveled (VMT), but they account for over 86 percent of CO emissions.

This improvement is expected to level off in the 1990s, however, because EPA projects continuing sharp increases in VMT. EPA estimates that VMT nationwide will grow 51 percent by the year 2000.

Initial EPA estimates project an additional 24 percent reduction in total CO emissions by the year 2005 due to fleet turnover under the current program after taking increased VMT into account. EPA estimates that this will bring 24 of the 51 non-attainment areas into attainment with the CO standard.

In addition, several of the provisions being contemplated in the ozone non-attainment section of the bill will also help reduce CO. A description of these, plus other envisioned controls on mobile sources, follows:

- **Light duty truck CO standards**

  Within 12 months, EPA will issue regulations under existing law requiring lower-weight light trucks to meet a 3.4 grams per mile standard in the 1992 model year. This will reduce CO emissions by about two percent.

- **Auto cold temperature CO standards**

  Within 12 months, EPA will issue regulations under existing law for a cold temperature standard and test procedures. This will reduce CO emissions by 7 to 12 percent.

- **Extended definition of "useful life"**

  Auto manufacturers currently must certify that emissions control devices for passenger cars will meet the CO standard at 5 years or 50,000 miles. EPA would amend the Clean Air Act to change this to ten years/100,000 miles for certification at time of production. However, EPA would not require a change in vehicle warranties and would limit recall testing to 75,000 miles. This will reduce CO by up to 10 percent.

- **Enhanced inspection and maintenance**

  An enhanced inspection and maintenance (I&M) program would allow some State flexibility in design, but generally would include: (1) tightening of definitions for vehicles exempt from current I&M programs; (2) tightening pass/fail limitations; and (3) increased sophistication of the emissions test. Programs would be required for CO non-attainment areas with population over 200,000 and

CO design values of 17 ppm or higher. This would reduce CO emissions by four to five percent.

In total, according to EPA, the current program plus these measures will reduce CO emissions by 45.6 percent by the year 2005. This will still leave six cities out of attainment without additional measures. Moreover, because some national measures targeted at automobiles will take some years to implement fully, EPA estimates that as many as 10 cities could remain out of attainment in the year 1995.

In order to bring these areas into attainment, EPA is proposing a major new initiative in oxygenated fuels.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
THE ADMINISTRATOR

THIS MESSAGE IS ELECTRONICALLY TRANSMITTED ON A RICOH RAPICOM 610

Transmission Number: (202) 475-9365

Verification Number: (202) 382-4719

TO: Mr. Mark Lange

FROM: Mr. David Greenberg
382-7960

COMMENTS:

Number of pages to follow: 2

Date: 5/31/89

Time: 3:03

Office of the Administrator/
Office of Regional Operations
Mail Code: A-101
Room: 1220 West Tower

DRAFT
CAA FACT SHEET

Marjorie--This is a rewrite of the first section of your fact sheet. Before it goes out in final form, Gordon and I need to review it--DEG

PRESIDENT ANNOUNCES PLANS FOR CLEAN AIR: ACID RAIN, TOXIC AIR POLLUTION AND SMOG TARGETTED

President George Bush today proposed the most sweeping revisions to the Clean Air Act since its enactment 20 years ago. Major reductions in acid rain, toxic air pollution and smog are the goals of the Administration proposal.

"I believe that every American has the right to breathe clean air", the President declared. "For the past twelve years, the fight against air pollution has been bogged down in political stalemates. We've made substantial progress since the Clean Air Act was first enacted, but I know we can do more. Today I am asking Congress to join me in breaking the stalemate, and win the battle for clean air."

The First Comprehensive Approach to Clean Air

The President's plan has three clear goals and three clear deadlines:

1. To reduce by 10 million tons the sulfur dioxide emissions that cause acid rain. The President's deadline is the year 2000.

2. To save ---- lives per year by curtailing the amount of toxic materials spewed into the atmosphere by automobiles, power plants and factories. The President's deadline for the air toxics segment of the Act is -----.

3. To reduce smog in the nation's major cities by ---- percent by the year -----.

"This is a long-term serious commitment," the President declared. "If these proposals are put into place, every city in nation will achieve healthy air quality standards."

The First Comprehensive Approach to Air Pollution

The President's proposal is premised on four basic principles:

DRAFT
CAA FACT SHEET

√Market principles: To combat acid rain, market incentives are provided to encourage the nation's utility companies to use "clean fuels" and "clean coal technology".

√Local controls: Implementation of the President's plan are left with the states, to insure maximum flexibility in achieving clean air goals.

√Firm deadlines: Strict penalties will be assessed on jurisdictions that fail to meet the plan's deadlines.

√New technologies: The President's proposal encourages the development of clean coal technology, alternative fuel systems for automobiles and other cost-effective innovations.

CLEAN AIR BILL

--week builds toward Thursday announcement

(ANNOUNCING CLEAN AIR PKG. ON THE 8TH)

stakeout:

~~Tues~~ AM - sport fishing event
((this is Nat'l Sport Fishing Week))

Wed - Clean Coal Plant

GET WITH:

GREENBERG / Rob Brewer
KEN/ALE
other policy people:
↓
Nancy Mallahey
will be the
best at
explaining

Colorado Town.
Speech Both
Weigh in w/ Brody

California: the worst air quality per capita
∴ look for exs. from CA?

Clean Coal
potential charge: it costs jobs.

{ we 10 yrs old to market this -- }
this is your future.

10 = "Bucks Unlimited speech"?

Rosenberg - wrote Clean Air
Brady - political

Boyden Gray -- "SCENIC DEVASTATION" committee

Book on T. Roosevelt! quotes

An historic breakthrough - if done right, in 20yrs, hist. will mark every city in
just one part of a "holistic" approach clean air
for the Pacific Northwest. standards.

Clean Air Act - Authorization on Thursday the 8th

event w/ G.B. in Pristine area, w/ grandson.

Stoddert: GB believes in stewardship

Brady:

- Act addresses prob. at their source
-- fumes from gasoline & dry-cleaners

Wed: NOON briefing w/ Kelly & Watkins
Clean Air announce - in Press Conf. statement, to be followed by ((SPIN:))
EAST Room: 11 AM

Thurs: Ducks Unlimited --

A child turns a tap / goes swimming...
A retired man goes fishing

Read; his philosophy SOUND BITES the future! SO THAT IN THE FUTURE, WE CAN ALL BREATHE EASY
(pts. of argument w/ environmentalists: alle. Incursion from central site -- the govt's role

Fri: Visit some out-of-town - VPs

Mon: announce Global Conference. (IN-TOWN)
(diplomatic comm.?) (Rose Gdn)

6th & M.S.N.

Ban Pesticides
Nat. Wild
Ban Tri Coal.
Ban Lung
Stress
Pesticides

Utah
EVENTS:

Emission. Bill of Rights

Env Rights / Prot. Lang v:

Pwis Rva right to breathe clean Air
Water
& clean Pres. will pass. Best right.
for us & our children

BIGGEST NEWS:

ACID RAIN — S.R. denied it / This bill meets all their needs, as well as N.C.
Canada angry.

AIR TOXICS

WE CAN WAIT NO LONGER.

It's time to break the gridlock in Congress

Break the stalemate

We can have clean air everywhere in US by 2000, if Congress passes this Legislation today

4

In 100,000,000 now live in areas with unhealthy air
(non attainment)

CLEAN AIR LDC

5/26

Jeff
Marjorie
David G.
Julia ~
Tom Supper writing Reilly?
Rosenberg NI

breaking a Congressional stalemate
1977 - amended.

Biggest revision since in 20 yrs.
& set the tone for next 20 yrs.

— going to be controversial — some think too far
protecting the health of Amr. " " not " enough

Federal leadership
~~this~~ not Federal solution -- State must make decisions
by team approach
Impact uncertain - esp. re acid rain
↳ free choice, flexib for industry
to find cost solution

Early reductions
SO2 cut by nearly ½ [2000] 10 million tons.
5 million tons by 1995.

DOES NOT INCLUDE MOBILE SOURCE INPUT.

Marjorie Buckholtz
382-7431
XXX***

7460 7632 7415

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CAA FACT SHEET

PRESIDENT ANNOUNCES PLANS FOR CLEAN AIR:
ACID RAIN, TOXIC AIR POLLUTION AND SMOG TARGETED

President George Bush today proposed the most innovative and comprehensive revisions to the Clean Air Act since it was last amended twelve years ago. Major reductions in acid rain, toxic air pollution and smog are the goals of the Administration's clean air proposal.

"I believe that every American has the right to breathe clean air", the President declared. " We've made substantial progress since the Clean Air Act was first enacted, but I know we can do more. For the past eight years, the fight against air pollution has been bogged down in political gridlock. Today I am asking Congress to join me in breaking the political stalemate."

A First Comprehensive Approach to Clean Air

The President's plan has solid goals and clear deadlines:

1. To reduce by 10 million tons a year the sulfur dioxide emissions that cause acid rain. The President's deadline is the year 2000.

2. To save hundreds of lives per year by curtailing the amount of toxic materials spewed into the atmosphere by automobiles, chemical plants and factories. The President's program will feature as much as 90 percent reductions from major industrial sources over the next 10 years.

3. To reduce smog in the nation's major cities by significant-ly reducing the emissions that contribute to it. Most cities will be required to meet the standards by 1995. Those cities with more severe problems will receive additional time provided they make steady progress in the interim.

so that every American in every city can breathe C.A.

"This is a long-term serious commitment," the President declared. "If these proposals are put into place, every city in the nation will achieve healthy air quality standards."

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DRAFT
CAA FACT SHEET

FOUR FUNDAMENTAL PRINCIPLES

The President's proposal is premised on several basic principles:

- Protection of public health: The goal of clean air legislation must be to prevent public exposure to cancer causing agents and other health risks.

- Early reductions and steady progress: In exchange for the establishment of realistic time frames to meet air quality goals, the President's proposal calls for early reductions and continued progress towards cleaning up the air.

- Market incentives: To combat acid rain, market incentives are provided to encourage the nation's utility companies to use "clean fuels" and "clean coal technology".

- New technologies: The President's proposal encourages the development of clean coal technology, alternative fuel systems for automobiles and other cost-effective innovations.

THE CLEAN AIR ACT AMENDMENTS

ACID RAIN

"The time for study alone has passed. I will ask for a program to cut millions of tons of sulfur dioxide emissions and reduce significantly nitrogen oxides as well." (italics-The President's first budget message to Congress).

CAUSES: Acid rain is formed when sulfur oxides and nitrogen oxides emitted from industrial and utility sources combine in the atmosphere undergoing a chemical transformation and fall to the ground in the form of acidic deposition, which can be rain, snow, or particles.

EFFECTS: Acid Rain has been known to contribute to declines in fish populations in certain areas of the US and Canada, and is responsible for forest declines and the loss of biological diversity in some fragile ecosystems. Acid rain is also responsible for the degradation of building materials after prolonged exposure to the elements.

XXX3/***

Past Efforts

The NATIONAL ACID PRECIPITATION ASSESSMENT PROGRAM (NAPAP) is in the process of completing its ten-year mission to study the causes and effects of acid rain. By the time its final report is released in 1990, the government will have invested $500 million to study these important issues.

A major clean coal technology effort which developed demonstrations and incentive programs for industries to voluntarily adopt state of the art equipment and strategies to burn fuel more cleanly, has been underway since 1986.

THE ADMINISTRATION PROPOSAL

A two-phased approach that emphasizes least-cost alternatives and flexibility on the part of American industry to make its own choices is at the heart of the proposal.

- By 1995, SO2 emissions will be reduced by five million tons.
- By the year 2000, emissions will be reduced by ten million tons per year from 1980 levels.
- Three year extensions to the year 2003 will be granted for plants that repower with Clean Coal Technology (CCT) strategies.
- Utilities are given discretion as to how they reach their reduction targets.

THE PROGRAM SPECIFICS WILL BE PRESENTED AS A GRAPHIC

PHASE I

- The nation's twenty largest SO2 emitters in nine states will meet emission limits of 1.1 pounds per million BTU.
- Trading emissions to maximize flexibility within utility systems or states (supervised by Governors) will be permitted. (9 states)
- Credit will be given for earlier, larger reductions
- Technology incentives are expected to provide some job protection for coal miners and existing coal markets.
- Oil fired plants will be required to meet an emissions limit of 1.0 pounds per million BTU's.

OR--

XXX4/***

PHASE I

- o 107 plants will have to meet a limit of 2.5 lbs per million BTU.

- o Total flexibility to meet targets via open trading among themselves or within their utility system. (18 states)

PHASE II

- o A nine million ton reduction (from 1980 utility emissions) by the year 2000, with a 3 year extension for repowering with clean coal technology.

- o Implementation through a system of transferable permits.

- o Maximum flexibility in obtaining reductions.

- o Because U.S.emissions which cause Acid Rain travel across international borders, and are known to impact Canada, a bilateral accord between the US and Canada will be negotiated shortly after passage of the legislation.

XXX5/***

AIR TOXICS

"We must act to make continued real progress toward cleaner air." October 14, 1988. (italics)

CAUSES: Air toxics are released into the atmosphere from manufacturing and chemical processing, (stationary sources) as well as from cars and trucks.(mobile sources)

The magnitude of the problem equals or exceeds the risk estimates for many other environmental problems. In 1987, major US industries released an estimated 2.7 billion pounds of toxic pollutants into the air.

- Major industry sources include chemicals, steel, smelting and electroplating.

- Automobiles, another major source of toxic air emissions. Motor vehicles are responsible for over half of all toxic air emissions.

EFFECTS:

- Toxic air emissions are known to cause cancer. Based on estimates for 80 particular chemicals, as many as 1500-3000 fatal cancers are caused per year. Air Toxics are also responsible for respiratory disease and birth defects.

PAST EFFORTS

Section 112 of the Clean Air Act requires standards for hazardous air pollutants to protect the public health with an "ample margin of safety." However, a quagmire of legal technicalities have helped to create a situation in which effective regulation was extremely difficult.

- Despite the presence of some 280 known or suspected toxic air pollutants, EPA has set standards for only seven since 1970.

- Because of the difficulties in the current law mentioned earlier, unacceptable health risks continue to exist in some communities.

- Existing automotive controls on diesel particulates, hydrocarbon emissions and a clean fuels program for cities which cannot meet clean air standards could help prevent 700 cancer deaths per year.

- Without federal guidance, some states have attempted to set their own standards resulting in often inconsistent regulation from state to state.

XXX6/***

THE ADMINISTRATION PROPOSAL

A two-phased program is planned, which implements technological controls in the first phase, then evaluates the remaining risk and takes further action as necessary to eliminate unacceptable health risks.

There is a consensus that an initial phase which promotes technology guarantees greater reductions than efforts over the last twenty years.

Feasibility and flexibility are the keys to this program. Cost considerations and practicality issues would help a plant determine the appropriate methods.

Industries would be mandated to identify and implement effective control technologies to bring them into compliance.

Companies would have absolute discretion to identify methods of compliance such as changes in chemical processes, chemical substitutions, and a variety of new work processes, to achieve the required reductions in emissions.

PHASE I

Fifty per cent of industrial categories must meet performance standards for control of air toxics.

- Government standards will be set for 10 source categories in 2 years, another 25 percent of the indentified source categories within the four five years and 50 percent within 7 years.

- Reductions will be based on the application of Maximum Achievable Control Technology (MACT). Companies that achieve a voluntary 90% reduction in emissions will not have to meet MACT standards.

- The remaining fifty per cent of the industrial categories will be up for further review.

PHASE II

- If the EPA Administrator determines that risk levels are still unacceptable after the application of MACT, additional controls will be mandated to reduce risks by up to 90 per cent.

- Performance standards will be developed by the Federal government, but the program will be implemented through permits, issued by the states.

XXX7/***

URBAN AIR QUALITY

" Despite good progress in reducing emissions from cars, factories, and power plants, more than 100 cities still do not meet federal clean air standards.

"Urban ozone is one of the most complex and difficult environmental issues facing this country...To really tackle this problem, will affect the way we work, live and play..." Scripps Institution, October 14, 1988.

Urban Air quality focuses on three pollutants of concern, ground-level ozone, carbon monoxide and particulates. The most widespread problems are caused by ozone.

OZONE

CAUSES: Unlike most common pollutants, ozone, the major component of urban smog, is not emitted directly. It is formed when volatile organic compounds (VOCs) are mixed with nitrogen oxides (NOx) in the presence of sunlight. Heat speeds up the reaction, and therefore, the problem is greater during the summer months. Areas such as Los Angeles and Houston are especially susceptible to ozone problems.

The major sources of VOCs are cars (40 per cent); small area sources such as bakeries, dry cleaners and consumer solvents (40 per cent) and large point sources such as petroleum refineries (15 per cent) and gasoline refueling (5 per cent), make up the difference. TO BE DEPICTED AS A PIE CHART

EFFECTS: (HEALTH) Ozone, the most widespread air pollutant is a corrosive gas which irritates the lungs, reduces effective functioning, and increases susceptibility to infection. As exposure to higher and more frequent levels increases, it can lead to permanent lung damage.

The current ozone standard is 0.12 parts per million (ppm) over a one-hour period. The health based standard is designed to protect healthy exercising adults from acute respiratory symptoms such as coughing, chest pains, and shortness of breath that are usually temporary and reversible.

(WELFARE) Other effects include ozone damage to vegetation, and crops such as soybeans, wheat and corn; damage to forests in Southern California, and suspected damage to southeastern U.S. forests.

XXX8/***

PAST EFFORTS

The United States has the most stringent and effective automobile emissions regulations in the world. In addition, under the present Clean Air Act, many large industrial sources have already been required to reduce emissions by roughly 80 per cent. Tailpipe emissions from new vehicles have been reduced by roughly **90 per cent since***.**

DESPITE THESE EFFORTS, OVER 100 MILLION AMERICANS ARE LIVING IN CITIES WHERE THE AIR THEY BREATHE MAY ENDANGER THEIR HEALTH. Over 30 cities exceeded the standard 10 or more days in the hot summer of 1988. **(attach list)**

THE ADMINISTRATION PROPOSAL

PRINCIPLES

- o This proposal will provide clean, healthy air to millions of people. The annual cost of all the auto-related measures would be only 1-2 percent of what Americans currently spend on autos.

- o Health goals should be met by bringing areas which exceed the standard into attainment without imposing unnecessary costs on areas whose air is already clean.

- o Federal leadership is needed to address problems that transcend state boundaries or to achieve more efficient or cost effective solutions nationally.

- o States will be given reasonable time to attain standards.

THE PROGRAM

(A GRAPHIC WITH WORDS AND BULLETS WILL BE PROVIDED HERE)

- o <u>Automotive Performance</u>

  - Certain light duty trucks will be required to meet the same standards for hydrocarbons as automobiles, and EPA will tighten the automotive hydrocarbon tailpipe standards.

  - Car companies will be required to extend the design life of emission control devices from 50,000 to 100,000 miles.

o Commercial/consumer products

EPA will have the authority to study, and if necessary, regulate VOC emissions from small sources such as consumer solvents and paints.

o Onboard Controls will require automotive manufacturers to put canisters on every vehicle to prevent refueling emissions. This will help reduce toxic releases as well as those that contribute to smog.

o Hazardous Waste and other Facilities

EPA will issue regulations and states will implement guidance and/or regulations to control damaging emissions from municipal landfills and barge loading.

o Enhanced Inspection and Maintenance

States will improve and expand their automobile inspections programs in serious and severe nonattainment areas.

o Alternative Fuels

Urban areas with the worst air quality will implement programs to ensure expanded use of alternative fuels. This includes oxygenated fuels to reduce carbon monoxide and air toxics and neat fuels, like methanol or compressed natural gas, to reduce emissions that contribute to ground level ozone.

o Gasoline Controls

EPA will reduce emissions of ozone-causing pollutants by further tightening of the volatility requirements of gasoline and implementing controls on vehicles to reduce evaporative emissions.

XXX10/***

REQUIRED FOR NON ATTAINMENT AREAS ONLY

AUTOMOTIVE PERFORMANCE

One of my priorities as Vice President has been to lead the search for alternative fuels-- so called 'clean fuels', such as methanol made from remote natural gas and ethanol made from grain, and to promote their use"(italics, October 14, 1988)

NEAT FUELS

The Administration proposes to replace a portion of the gasoline fleet in certain cities with new vehicles that operate on clean burning fuels. This will be a bold, cost-effective strategy for significantly reducing the automobile's contribution to ozone pollution.

THE PROGRAM will include :

- A requirement that all new urban transit buses in dirty air cities be clean-fueled beginning in 1991.

- A Demonstration program requiring auto manufacturers to produce vehicles that operate on clean fuels; and

- A requirement to sell a certain percentage of clean-fueled vehicles in dirty air cities, if EPA, after considering the success of the demonstration, determines that the program is appropriate, based on technical and economic feasibility.

COMMERCIAL/INDUSTRIAL CONTROLS
CONTROL TECHNOLOGY GUIDELINES (CTG's)

EPA will provide guidelines for industry and businesses to use in controlling existing major emitters. The most cost effective CTG's will be issued first.

CARBON MONOXIDE NON ATTAINMENT

There are currently 52 areas which do not meet EPA's Carbon Monoxide standard. However, EPA Clean Air Act initiatives are expected to reduce Carbon Monoxide over the next decade.

CAUSE: Two thirds of the CO emissions come from automobiles. Other major sources include industrial processes and wood stoves.

EFFECTS: Carbon Monoxide (CO) is a colorless, odorless gas that reduces the oxygen carrying capacity of the blood. Fatigue, nausea, and reduced work capacity are common effects in adults. It also impairs learning ability in children. CO is a serious health threat to those with heart or circulatory disease. According to limited animal studies, CO may adversely affect fetuses.

XXX11/

THE ADMINISTRATION PROPOSAL (Will be displayed as a graphic with bullets)

- Auto cold temperature CO standards and test procedures will reduce CO emissions by 7 to 12 per cent.

THIS IS BEING REWORKED

- **Extended definition of "useful life" certifies that emissions control devices for passenger cars will meet the CO standard at 5 years or 50,000 miles. This will reduce CO by up to 10 per cent.**

The total effort to reduce CO emissions will elicit a nearly 50 per cent per cent decrease by the year 2005. This still leaves six cities out of attainment without additional measures. Further, since some national measures targeted at automobiles will take years to implement fully, EPA estimates that as many as 10 cities could not comply by 1995.

<u>OXYGENATED FUELS</u> THIS SECTION IS STILL UNDERGOING REVIEW

PRINCIPLES

Since increasing the oxygen level in gasoline greatly reduces the carbon monoxide emissions from motor vehicles, a federally mandated oxygenated fuels program will be mandated to control CO. Oxygenated fuels are blends of gasoline and ethanol, methanol, MTBE or ETBE. Oxygenated fuels have the additional benefit of reducing air toxics emissions, and in some cases, reducing emissions that cause ground level ozone.

Such fuels can be made from grains such as corn, thereby offering economic benefits to American farmers while providing cleaner air to millions of urban residents.

THE PROGRAM

This bold initiative will launch a program that requires the most severe and serious urban air quality locales to supply oxygenated fuels to reduce emissions of CO and air toxics.

The program will require that fuels sold in cities with the worst CO levels contain at least a 2.7 oxygenation level, and will also be mandatory in cities with some CO problems, as well as serious or severe levels of ground level ozone.

XXX12/***

PARTICULATE MATTER

Approximately 70 areas of the country, encompassing 60 million people do not meet the air quality standards.

The particulate or PM10 standards, which were revised in 1987, apply to the smaller particles that are most likely to penetrate the lungs.

CAUSES: Such particles can include acid sulfates, toxic organics and metals, and insoluble dusts that come from traditional stack emissions as well as area sources such as wood stoves and open burning. Construction, roadways and mobile sources are also contributors.

EFFECTS: Premature death in elderly and ill persons, aggravation of existing respiratory disease, increased respiratory illness, as well as effects related to the toxic components of particulate matter.

Visibility problems, soiling and nuisance characterize the remaining effects of particulates on the environment.

THE PROGRAM

The President's program calls for states to implement programs to reduce levels of particulate matter.

- o Extending deadlines to 1994 for moderate areas and 2001 for serious ares.
- o Serious areas will use additional reasonably available control measures in exchange for longer deadlines.

BEST INTENTIONS

THE UNFULFILLED PROMISE OF THE CLEAN AIR ACT

'Tall Stacks' and Acid Rain

Northeast Suffers From Faraway Emissions

Second of four articles

By Michael Weisskopf
Washington Post Staff Writer

HUNTINGTON, Vt.

Amid the floral sprays of a late spring on Camels Hump, a 4,000-foot Green Mountain peak, are patches of death.

Once too dense to penetrate, the forest opens broadly to stands of defoliated red spruce, teetering like charred victims of fire. At their feet lay 200-year-old firs, violently snapped from their bases.

The gloomy scene contrasts sharply with the explosion of new growth 600 miles away in the Ohio River Valley, but to many scientists there is a crucial connection.

Rising incongruously from the rolling, midwestern farmland are utility smokestacks almost as high as the Empire State Building. Known simply as "tall stacks," the tapered, concrete towers enable utility companies to emit large quantities of sulfur dioxide and technically still comply with the Clean Air Act because no pollution occurs in the valley below. Instead the gases that the stacks shoot thousands of feet into the air move downwind to Canada and the Northeast, turn acidic and eventually fall in rain and snow.

Scientists say that much of the acid fallout in Vermont comes from the valley, and Vermont officials and environmentalists blame tall stacks for the forest damage.

Congress and federal courts have repeatedly prohibited

See AIR, A6, Col. 1

Photo Copy Preservation

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BEST INTENTIONS

'Tall Stacks' A Product of Concessions

AIR, From A1

reliance on tall stacks to achieve local air quality standards. But 108 have been erected nationwide since the Clean Air Act was passed in 1970 and still stand today, monuments to the power of special interests.

By building the stacks—typically 400 to 600 feet high—utilities have been able to continue burning cheap, high-sulfur coal, avoid the expense of sulfur-removal devices and still meet limits on sulfur dioxide near the plant.

The power companies were able to do this because they pushed the Environmental Protection Agency until they got what they wanted, blanketing the government with lobbyists, exploiting ambiguities in the law, ignoring court rulings and manipulating public opinion. The EPA, guardian of the nation's air resources, handed out one concession after another.

The EPA's handling of tall stacks illustrates a larger truth about the federal attempt to clean up the environment.

A groundbreaking piece of legislation when it was enacted 19 years ago, the Clean Air Act in many respects seems almost futile today. While no one disputes that things would be worse without it, the legislation has not prevented unhealthy levels of pollution for more than half the population, depletion of the ozone level by industrial gases, contamination of drinking-water sources by airborne toxics and acid damage to lakes and forests.

Critics turn the blame not on the act but on those charged with implementing it. The EPA, they say, failed to force industry to make the changes necessary to save the nation's air.

Few laws have required more dramatic action from the industrial sector—utilities, automakers, oil and chemical companies and steel manufacturers. According to government statistics, corporations have spent $400 billion on technology to cut auto pollutants 90 percent, take lead out of gasoline, filter out industrial soot and remove sulfur from coal combustion gas.

But the steps were not taken voluntarily. Industry fought the changes every step of the way, and the history of tall stacks illustrates the pattern of accommodation that has been followed by EPA.

The concessions that industry has won have come at a heavy price. Scientists and environmentalists cite these costly results:

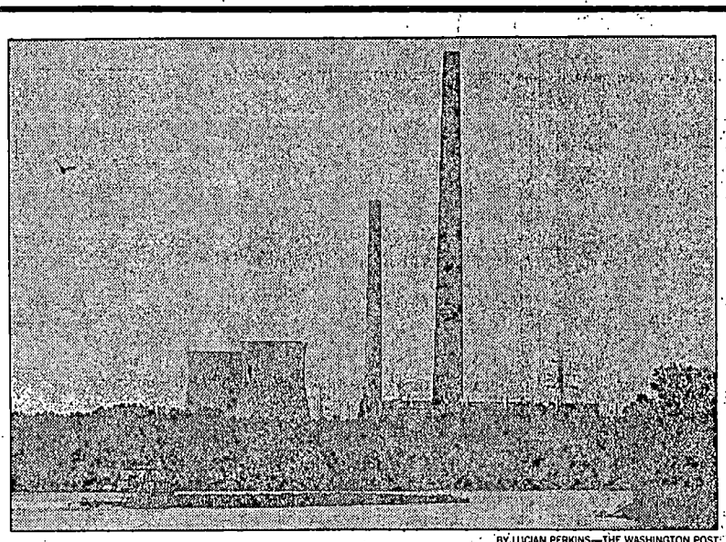
- Ozone levels may not have reached the critical stage they are at now had the EPA in the early 1980s not extended deadlines and relaxed standards for auto emissions.
- The stratospheric ozone layer—the "good" ozone—may not have become so depleted if the EPA had observed the scientific consensus as far back as the 1970s and banned chlorofluorocarbons (CFCs).
- Northwest Indiana may not have been covered in so much soot if the EPA had not allowed steel companies in the Gary area to avoid requirements for particulate emission controls in the early 1980s and operate without a state control plan since 1977.

Industry resistance was anticipated by sponsors of the act, but they were ready to prescribe strong medicine to deal with what was commonly seen then as a national crisis.

"It is a tough bill because only a tough law will guarantee America clean air," then-Sen. Edmund S. Muskie (D-Maine), the act's chief sponsor, told the Senate in September 1970. "Industry has been presented with challenges in the past that seemed impossible to meet, but has made them possible."

Such rhetoric was not surprising given the political climate then. The previous April, on Earth Day, millions of people demonstrated around the country for environmental protection. President Richard M. Nixon, then in his first term and fearing Muskie's presidential ambitions, was unwilling to cede him the environment as an issue.

Industry lobbyists were far fewer and did not take the bill seriously at first, recalled Leon Billings, who served as Muskie's top environmental aide. The chief lobbyist for General Motors never visited Muskie and no top auto company executive testified at subcommittee hearings. "They honestly

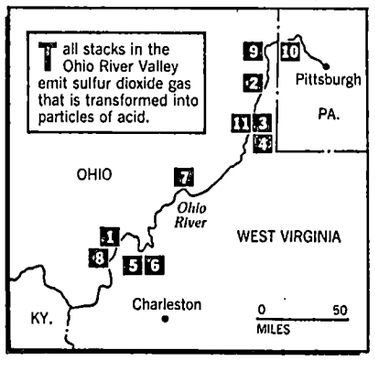


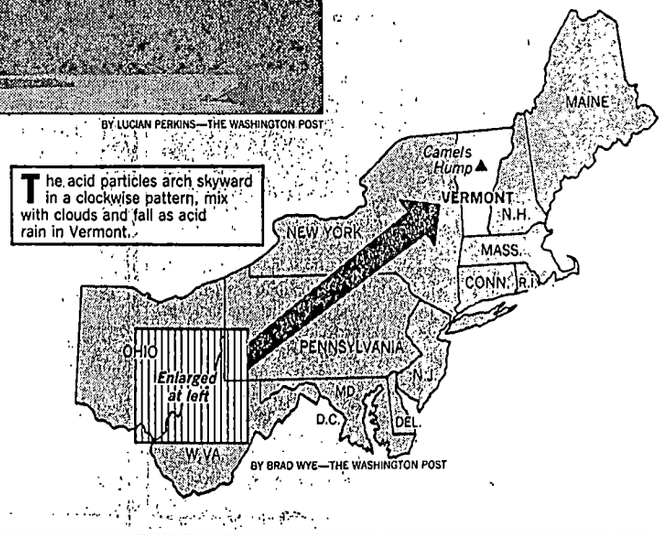
BY LUCIAN PERKINS—THE WASHINGTON POST

ACID RAIN

Where It Starts . . .

Coal barge navigates Ohio River with the Gavin and Kyger Creek power plant stacks in view. "On balance, tall stacks have resulted in environmental benefits," says an engineer at American Electric Power, which operates Gavin. Officials in Vermont disagree.





BY BRAD WYE—THE WASHINGTON POST

LOCATION OF STACKS:

1. General James M. Gavin Plant
American Electric Power
Cheshire, Ohio
One stack: 1,103 ft.

2. Cardinal Plant
American Electric Power
Brilliant, Ohio
Two stacks: 900 ft. and 826 ft.

3. Mitchell Plant
American Electric Power
Moundsville, W. Va.
One stack: 1,206 ft.

4. Kammer Plant
American Electric Power
Moundsville, W. Va.
One stack: 900 ft.

5. Philip Sporn Plant
American Electric Power
New Haven, W. Va.
Two stacks: 600 ft. and 602 ft.

6. Mountaineer Plant
American Electric Power
New Haven, W. Va.
One stack: 1,103 ft.

7. Richard H. Gorsuch Plant
American Municipal power
Marietta, Ohio
One stack: 362 ft.

8. Kyger Creek Plant
Ohio Valley Electric Corp.
Gallipolis, Ohio
One stack: 1,000 ft.

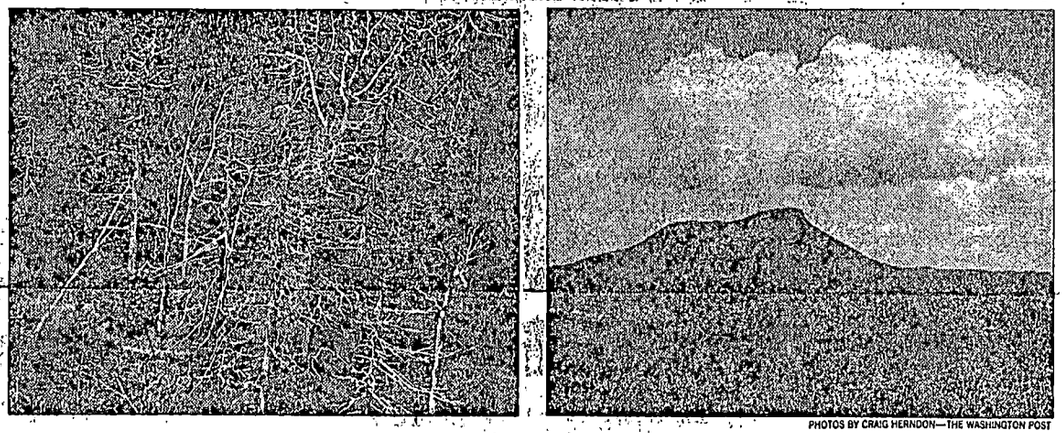
9. Sammis Plant
Ohio Edison
Stratton, Ohio
Four stacks: 1,000 ft., 850 ft. and two 500 ft.

10. Bruce Mansfield Plant
Ohio Edison
Shippingport, Pa.
Two stacks*: 950 ft. and 600 ft.

11. Burger Plant
Ohio Edison
Shadyside, Ohio
One stack: 850 ft.

*Stacks equipped with scrubbers.

. . . And Where It Falls



PHOTOS BY CRAIG HERNDON—THE WASHINGTON POST

Patches of defoliated spruce and fallen firs mark Vermont's 4,000-foot Camels Hump, far from Ohio River Valley "tall stacks."

from the moment legislation is being formulated, continuing at the stage legislation is actually being considered, through markups and into conference committees," said Curtis Moore, until recently the Republican counsel to the Senate Environment and Public Works Committee. "If you succeed in enacting something, they will be immediately at the agency. When regulations are proposed, they are fighting them. When they're final, they challenge them in court. Then they start the process all over again and find the loopholes."

The rise of tall stacks reflects that general pattern.

Since the early 1980s, scientists have been able to trace the origin of acid rain by analyzing emission patterns, air pathways and the chemical composition of pollutants. Certain airborne particles have regional signatures, such as arsenic and selenium. They originate in the Midwest, where power plants burn coal rich in those elements.

Scientists generally agree that half of the acidic particles in Vermont come from the [illegible] Ohio Valley. On weathered barns and farmhouses along a 150-mile stretch of the Ohio.

The General James M. Gavin plant near Gallipolis emits more sulfur dioxide through its 1,105-foot stack than any source in the nation, more than the total emissions of some states—350,000 tons a year. A mile away, the Kyger Creek plant, through its 1,000-foot stack, releases 220,000 tons a year of the pollutant.

Utility officials defend tall stacks as a legitimate way of meeting local sulfur dioxide limits at the least expense to ratepayers. Moreover, they say, tall stacks shore up local economies by permitting use of high-sulfur coal mined in the Midwest.

Do tall stacks simply shift the damage elsewhere in the form of acid rain? "The answers aren't in yet," said John M. McManus, an environmental engineer at American Electric Power, owner of Gavin and other Ohio Valley plants. He said industry studies indicate that most sulfur dioxide and its byproducts fall from the air after traveling far shorter distances than from Ohio to Vermont. "On balance tall stacks have resulted in environ-

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Scientists say there is a clear pattern t the emissions. The gases move quickly fron the valley, change into acidic particles calle sulfates and travel hundreds of miles to the Northeast. The particles pass in and out o clouds, liquefy and eventually fall as precip itation, which in Vermont is said to be 10 t 100 times more acidic than normal rain.

Camels Hump is a good laboratory to as sess the effects of acid rain and fog. Since 1965 it has been the subject of an ecologica study counting and measuring trees.

A 1986 survey marked dramatic changes Nearly every species had declined in number most prominently the red spruce. Once a dominant tree on Camels Hump, pushing its bushy, evergreen crown 100 feet high, the red spruce had declined by 65 percent; sugar maples had dropped by 37 percent.

"The proportions of dieback are staggering," said Hubert Vogelmann, chairman o the University of Vermont's botany depart ment and head of the survey team. "I

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Industry lobbyists were far fewer and did not take the bill seriously at first, recalled Leon Billings, who served as Muskie's top environmental aide. The chief lobbyist for General Motors never visited Muskie and no top auto company executive testified at subcommittee hearings. "They honestly believed we'd go away," Billings said.

The toughest provisions of the bill, such as the 90 percent cuts in auto emissions, were drafted in closed meetings. When the subcommittee emerged with a tough bill, industry "had never seen anything like it," Billings said.

But special interests learned from the defeat. Since then they have missed few opportunities to influence the act and its enforcement at the legislative, regulatory and judicial levels.

The number of lobbyists representing air polluters has mushroomed, and they include many former staff members of the key Senate and House committees who have ready access to their old colleagues.

Special interests give generously to congressional and presidential campaigns. Since 1981, political action committees of firms and organizations with a direct interest in clean air legislation have contributed $21.8 million, according to records compiled by The Washington Post and the Public Interest Research Group.

Utilities, with plants in nearly every legislative district, are among the most effective pressure groups. The industry has dozens of full-time Capitol Hill lobbyists and retains a special team of lawyers to fight regulatory and legal battles.

Campaign contributions are funneled through an industry-wide donor—Power Pac—and sent by individual companies. They have totaled $6.4 million since 1981. An industry group, Citizens for Sensible Control of Acid Rain, has used mail and phone calls to warn consumers of the costs of acid rain legislation, citing utility estimates widely regarded as inflated.

"They fight at every stage of the process, from the moment legislation is being formulated, continuing at the stage legislation is actually being considered, through markups and into conference committees," said Curtis Moore, until recently the Republican counsel to the Senate Environment and Public Works Committee. "If you succeed in enacting something, they will be immediately at the agency. When regulations are proposed, they are fighting them. When they're final, they challenge them in court. Then they start the process all over again and find the loopholes."

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Scientists generally agree that half of the acidic particles in Vermont come from the Midwest, primarily the Ohio River Valley. On days of the highest acid levels, the pollution is very likely to have originated in the valley.

The bucolic setting by the banks of the Ohio seems an unlikely source of industrial pollution. But the tall stacks that sprout from the rich farmland release enormous volumes of sulfur dioxide.

Seventeen tall stacks tower over the weathered barns and farmhouses along a 150-mile stretch of the Ohio.

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That view does not have many adherents among Vermont officials. "Utilities reflect their own self-interest—to avoid the costs of cleaning up pollution," said Jonathan Lash, Vermont's secretary of natural resources. "I find that understandable. The EPA reflects the unwillingness of industry to confront the problem. Perhaps that was understandable in 1970. In 1989, it's unforgivable."

Scientists say there is a clear pattern to the emissions. The gases move quickly from the valley, change into acidic particles called sulfates and travel hundreds of miles to the Northeast. The particles pass in and out of clouds, liquefy and eventually fall as precipitation, which in Vermont is said to be 10 to 100 times more acidic than normal rain.

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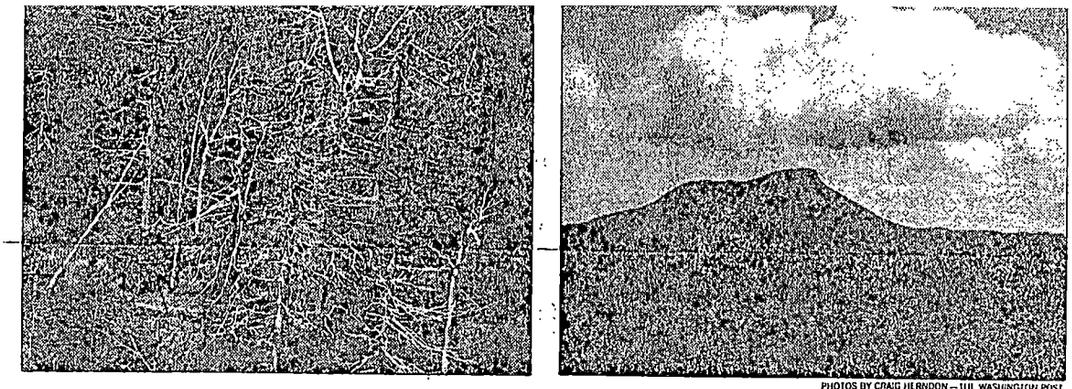
"The proportions of dieback are staggering," said Hubert Vogelmann, chairman of the University of Vermont's botany department and head of the survey team. "In 1965, the trail was just a tunnel through a dense forest. You could barely see the sky."

No one knows the cause of forest damage on Camels Hump and other high-elevation forests along the Appalachian spine. Normal stresses—insects, fungus and drought—may play a role. But Vogelmann said he believes air pollution is a contributing factor, if not the



PHOTOS BY CRAIG HERNDON—THE WASHINGTON POST

Patches of defoliated spruce and fallen firs mark Vermont's 4,000-foot Camels Hump, far from Ohio River Valley "tall stacks."

Auto Emission Cleanup Stalled in Reagan Years

Tracing the major sources of air pollution 19 years ago, Congress found that 42 percent of it came from motor vehicles. Today, despite revolutionary changes in auto engines required by the Clean Air Act of 1970, the percentage is higher.

The tremendous growth in automobiles and trucks since 1970 has been a major factor. But the effort to clean up motor vehicle emissions also has been seriously hampered, according to environmentalists and public health experts, by concessions to the automobile industry, especially while Ronald Reagan was president.

During his administration, the Environmental Protection Agency:

- Doubled the number of 1982 models receiving special exceptions to carbon monoxide standards.
- Delayed regulation of nitrogen dioxide and the tiny, toxic particles emitted by diesel buses, trucks and cars.
- Postponed cutbacks in carbon monoxide, hydrocarbons, nitrogen dioxide and particulates from trucks and relaxed a program to assure compliance of heavy trucks.
- Failed to meet Congress's requirement for either gas-pump nozzles or under-the-hood canisters to capture hydrocarbons during refueling.
- Took pressure off states to aggressively inspect and maintain auto pollution-control devices.

Specialists say the concessions by Reagan, who considered regulation an undue burden on industry, are at least partly responsible for today's crises over carbon monoxide and ozone, produced by nitrogen dioxide, hydrocarbons and sunlight.

"We're paying for it in air quality," said Michael Walsh, former chief of the EPA's mobile sources program. "All those vehicles are out there without strong controls. We set back the country a decade."

Walsh said he left the EPA in 1981 after repeated demands by the White House to further relax controls. "The attitude was one of accommodation," he said.

The Clean Air Act reflected a markedly different attitude 19 years ago. For the first time, Congress set technological goals and deadlines for the powerful automakers. Detroit was required in effect to design a new car by the mid-1970s to eliminate 90 percent of hydrocarbons, carbon monoxide and nitrogen dioxide emissions.

They said it couldn't be done, but auto companies modified the catalytic converter, initially developed by the petroleum industry, which reduced pollutants to harmless gases. By the early 1980s, new cars had cut hydrocarbons and carbon monoxide by 90 percent and nitrogen dioxide 75 percent, although weather, driving conditions and speed prevented converters from being more effective.

With improvements in passenger cars, the Carter administration extended controls to other vehicles, including diesel-fueled cars, buses and trucks and gasoline trucks. Most of those controls were slated to become effective in 1985.

But Reagan and his first EPA chief, Anne Gorsuch Burford, delayed and watered down the reforms in quick order.

"After steady progress in cleaning up air pollution, we've stopped and may be going backward," Walsh said.

—Michael Weisskopf

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BEST INTENTIONS

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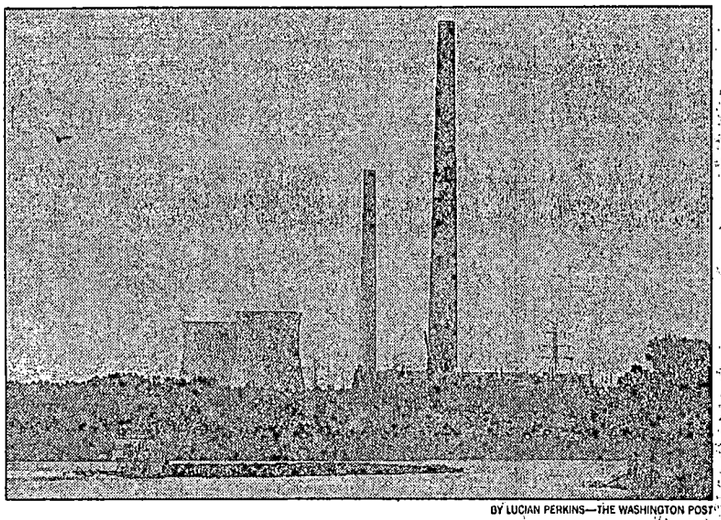

BY LUCIAN PERKINS—THE WASHINGTON POST

ACID RAIN

Where It Starts . . .

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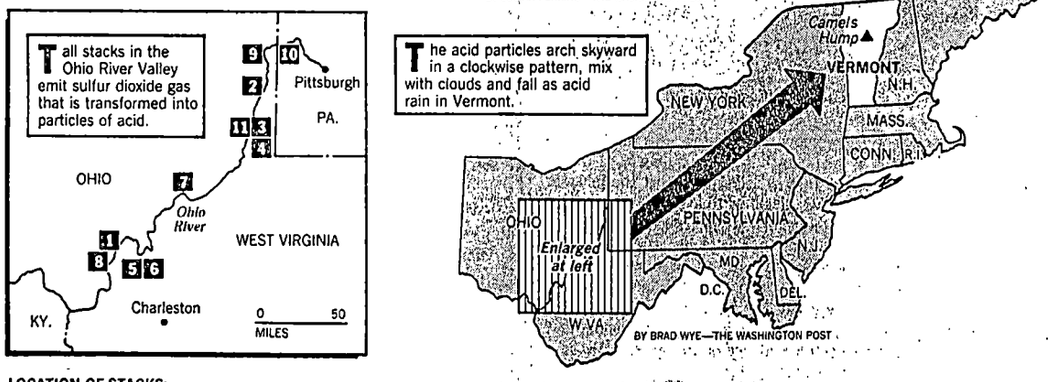

LOCATION OF STACKS:

1. General James M. Gavin Plant
American Electric Power
Cheshire, Ohio
One stack: 1,103 ft.

2. Cardinal Plant
American Electric Power
Brilliant, Ohio
Two stacks: 900 ft. and 826 ft.

3. Mitchell Plant
American Electric Power
Moundsville, W. Va.
One stack: 1,206 ft.

4. Kammer Plant
American Electric Power
Moundsville, W. Va.
One stack: 900 ft.

5. Philip Sporn Plant
American Electric Power
New Haven, W. Va.
Two stacks: 600 ft. and 602 ft.

6. Mountaineer Plant
American Electric Power
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One stack: 1,103 ft.

7. Richard H. Gorsuch Plant
American Municipal power
Marietta, Ohio
One stack: 362 ft.

8. Kyger Creek Plant
Ohio Valley Electric Corp.
Gallipolis, Ohio
One stack: 1,000 ft.

9. Sammis Plant
Ohio Edison
Stratton, Ohio
Four stacks: 1,000 ft., 850 ft. and two 500 ft.

10. Bruce Mansfield Plant
Ohio Edison
Shippingport, Pa.
Two stacks*: 950 ft. and 600 ft.

11. Burger Plant
Ohio Edison
Shadyside, Ohio
One stack: 850 ft.

*Stacks equipped with scrubbers.

. . . And Where It Falls

PHOTOS BY CRAIG HERNDON—THE WASHINGTON POST

Patches of defoliated spruce and fallen firs mark Vermont's 4,000-foot Camels Hump, far from Ohio River Valley "tall stacks."

from the moment legislation is being formulated, continuing at the stage legislation is actually being considered, through markups and into conference committees," said Curtis Moore, until recently the Republican counsel to the Senate Environment and Public Works Committee. "If you succeed in enacting something, they will be immediately at the agency. When regulations are proposed, they are fighting them. When they're final, they challenge them in court. Then they start the process all over again and find the loopholes."

The rise of tall stacks reflects that general pattern.

Since the early 1980s, scientists have been able to trace the origin of acid rain by analyzing emission patterns, air pathways and the chemical composition of pollutants. Certain airborne particles have regional signatures, such as arsenic and selenium. They originate in the Midwest, where power plants burn coal rich in those elements.

Scientists generally agree that half of the acidic particles in Vermont come from the weathered barns and farmhouses along a 150-mile stretch of the Ohio.

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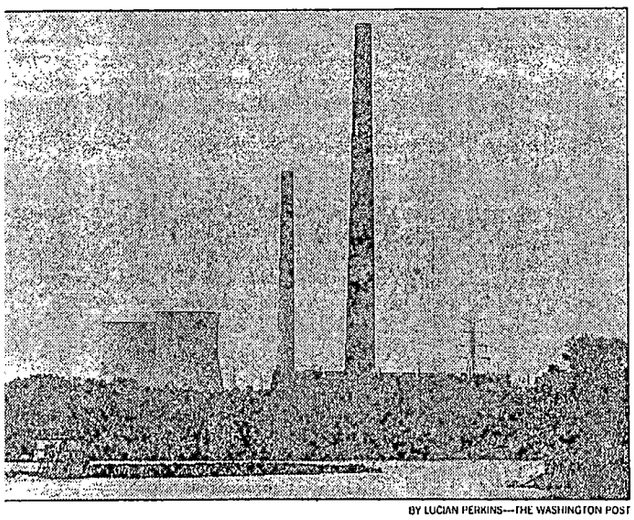

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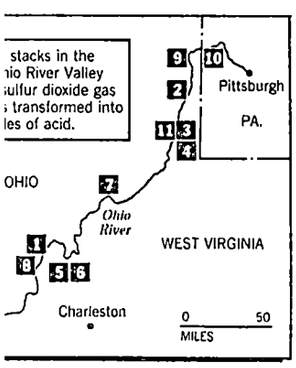
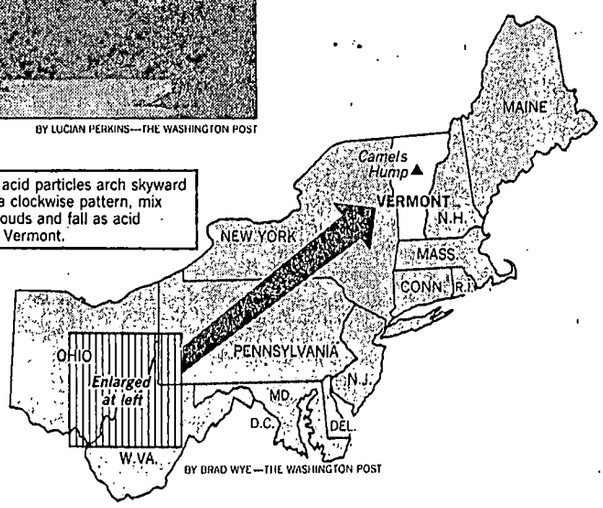


The acid particles arch skyward in a clockwise pattern, mix with clouds and fall as acid rain in Vermont.



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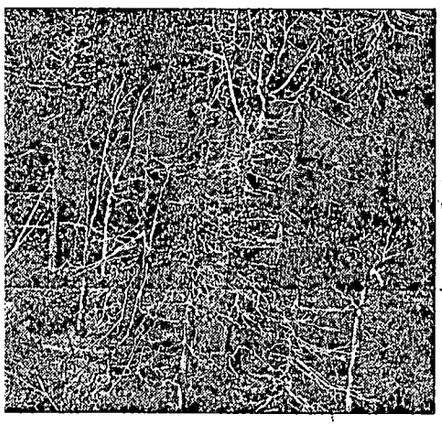

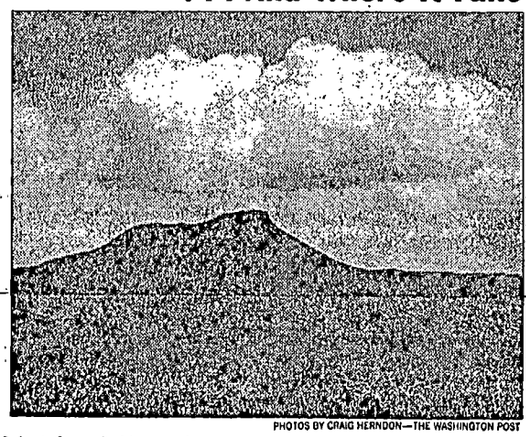

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"The proportions of dieback are staggering," said Hubert Vogelmann, chairman of the University of Vermont's botany department and head of the survey team. "In decisive one—the final blow to trees already weakened by natural enemies.

One piece of the evidence that he said tends to implicate acid rain is that the most damaged side of Camels Hump faces west—toward the land of tall stacks.

The fact that tall stacks simply transfer pollution rather than eliminate it was known to Congress at the time it drafted the 1970 law. While the final legislation did not explicitly rule out tall stacks, it called for plans that include "emission limitations" to achieve air quality standards.

Utilities were undeterred, erecting tall stacks at new plants such as Gavin and raising stacks at old plants while lobbying EPA and state officials responsible for implementing air quality standards. They argued that technology to scrub sulfur from coal was too expensive and unproven, that low-sulfur coal was in short supply and that tall-stack dispersion was the only practical alternative.

The EPA was persuaded. In January 1972, it gave the first official blessing to tall stacks. Specifically, it approved a plan in Georgia that relied on the raising of utility smokestacks to meet the new ground-level sulfur dioxide standard.

Two years later, the EPA and tall stacks received their first judicial rebuke. The U.S. Court of Appeals in New Orleans, ruling in 1974 on a suit by the Natural Resources Defense Council (NRDC), found that states could approve tall stacks, but only after utilities tried to reduce emissions by other means.

Utilities, however, paid little attention to the ruling and took their case to Congress, using the Arab oil embargo to drive home the need for tall stacks. The Federal Power Commission, using statistics from the utilities, issued a report predicting power shortages if plants were forced to meet sulfur dioxide standards by the 1975 deadline.

Although the EPA had judged scrubbers feasible by then, the utilities were unwilling to invest in the costly devices. American Electric Power ridiculed scrubbers in national newspaper ads. And a company executive warned Congress that mandating "this primitive, monstrously expensive technology" would create a "national energy tragedy."

The stack for the Gavin plant cost less than $10 million to build in the mid-1970s, according to the company. Outfitting it with scrubbers today would cost $756 million.

Congress met the utilities halfway, passing legislation in June 1974 that permitted temporary reliance on tall stacks on a case-by-case basis. But efforts to legitimize tall stacks as a permanent control strategy were soundly defeated.

In 1976 the EPA issued new guidelines that grandfathered all stacks raised before 1972 and set a height limit of 2.5 times that of the boiler house for newer stacks.

By 1977, Congress began to link tall stacks with acid rain damage then being reported in lakes and forests in Canada and the Northeast. Seeking to close loopholes in the 1976 guideline, lawmakers amended the act. Utilities were not to rely on stack height to meet sulfur dioxide standards, unless "necessary" to avoid "excessive concentrations" of pollution caused by air turbulence. If necessary, they could raise the stack to 2.5 times the height of the pollution source.

David Hawkins, then head of the EPA's air office, said that in hindsight, Congress apparently intended to permit tall stacks to avoid excessive pollution—but only after the use of scrubbers or clean fuels to reduce emissions. He said that is consistent with the 1974 court ruling.

Under that reading, Hawkins said, power plants like Gavin would have had to use scrubbers or low-sulfur coal to meet sulfur dioxide limits, relying on their tall stacks only if excessive concentrations persisted because of turbulence.

But power company lawyers had a different interpretation, which Hawkins, as the EPA's air chief, initially accepted. Because air turbulence always causes excessive levels of pollution from low stacks, utilities claimed the automatic right to raise stacks to 2.5 times the height of the pollution source, and proceeded to do so.

"It was one of those times when the adversary system didn't function properly," said Hawkins, now a senior attorney at NRDC.

By early 1980, Hawkins said, "we started to wake up." That June, the EPA, citing acid rain concerns, turned down the request of a Cleveland utility to raise its stacks and was formulating a program to reduce sulfur emissions nationwide.

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That view does not have many adherents among Vermont officials. "Utilities reflect their own self-interest—to avoid the costs of cleaning up pollution," said Jonathan Lash, Vermont's secretary of natural resources. "I find that understandable. The EPA reflects the unwillingness of industry to confront the problem. Perhaps that was understandable in 1970. In 1989, it's unforgivable."

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No one knows the cause of forest damage on Camels Hump and other high-elevation forests along the Appalachian spine. Normal stresses—insects, fungus and drought—may play a role. But Vogelmann said he believes air pollution is a contributing factor, if not the

uto Emission Cleanup Stalled in Reagan Years

acing the major sources of air pollution 19 years ago, Congress found that 42 percent of it came from motor vehicles. Today, despite revolutionary changes in auto engines required Clean Air Act of 1970, the percentage is higher.

tremendous growth in automobiles and trucks since 1970 een a major factor. But the effort to clean up motor vehicle ions also has been seriously hampered, according to environalists and public health experts, by concessions to the automodustry, especially while Ronald Reagan was president.

ring his administration, the Environmental Protection Agency: ubled the number of 1982 models receiving special exceptions rbon monoxide standards.

layed regulation of nitrogen dioxide and the tiny, toxic particmitted by diesel buses, trucks and cars.

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ook pressure off states to aggressively inspect and maintain pollution-control devices.

ecialists say the concessions by Reagan, who considered regon an undue burden on industry, are at least partly responsible oday's crises over carbon monoxide and ozone, produced by gen dioxide, hydrocarbons and sunlight.

"We're paying for it in air quality," said Michael Walsh, former chief of the EPA's mobile sources program. "All those vehicles are out there without strong controls. We set back the country a decade."

Walsh said he left the EPA in 1981 after repeated demands by the White House to further relax controls. "The attitude was one of accommodation," he said.

The Clean Air Act reflected a markedly different attitude 19 years ago. For the first time, Congress set technological goals and deadlines for the powerful automakers. Detroit was required in effect to design a new car by the mid-1970s to eliminate 90 percent of hydrocarbons, carbon monoxide and nitrogen dioxide emissions.

They said it couldn't be done, but auto companies modified the catalytic converter, initially developed by the petroleum industry, which reduced pollutants to harmless gases. By the early 1980s, new cars had cut hydrocarbons and carbon monoxide by 90 percent and nitrogen dioxide 75 percent, although weather, driving conditions and speed prevented converters from being more effective.

With improvements in passenger cars, the Carter administration extended controls to other vehicles, including diesel-fueled cars, buses and trucks and gasoline trucks. Most of those controls were slated to become effective in 1985.

But Reagan and his first EPA chief, Anne Gorsuch Burford, delayed and watered down the reforms in quick order.

"After steady progress in cleaning up air pollution, we've stopped and may be going backward," Walsh said.

—Michael Weisskopf

emissions. [illegible]

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But it never had a chance. Ronald Reagan entered the White House in 1981, and one of the first decisions of Anne Gorsuch, the new EPA administrator, was to rescind the Cleveland decision. In 1982, she issued a new regulation affirming the industry's view of the 1977 amendment and allowing unlimited stack heights case by case.

The NRDC sued again, and in 1983, the U.S. Court of Appeals for the District of Columbia Circuit ruled that utilities were not entitled to an automatic 2.5-fold increase for stacks that were heightened after the 1970 act.

In 1985, Lee M. Thomas, then EPA chief, proposed eliminating the automatic 2.5-fold credit but grandfathering in the scores of utilities that had already received approval.

In January 1988, the D.C. Circuit declared the grandfathering provision excessive and sent it back to the EPA, where the issue remains today.

"The moral of the story is that Congress has to be pretty damn clear when it adopts these requirements to give directions to the agency that can't get confused," Hawkins said. "Confusion encourages the agency to take the path of least resistance, which is almost always to accommodate the industry dogging it."

William D. Ruckelshaus, who as EPA administrator opened the door to tall stacks 17 years ago, said that "the decision to approve it is hard to justify today. We didn't give enough attention to the long-range transport of those pollutants.

"You'd have to say that while you were solving one problem, you were creating another," he said.

NEXT: Protecting the most vulnerable

Staff researchers Bruce Brown and Michelle Hall contributed to this report.

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A Changed Equation on Pollution

Mitchell, Bush Pledge Legislation, but Remedies Are Divisive

Last of four articles

By Michael Weisskopf
Washington Post Staff Writer

His attempt to work out a compromise on acid rain legislation having failed, Sen. George J. Mitchell (D-Maine) last fall summed up the frustration felt by those who have tried to strengthen the Clean Air Act in recent years.

For weeks, Mitchell had shuttled from meeting to meeting, trying to balance environmental interests against loss of mining jobs. He crafted complicated formulas to subsidize cleanup costs of the dirtiest midwestern utilities, while protecting high-sulfur coal interests in West Virginia from low-sulfur suppliers in the West. In the final days of the session, the deal fell through.

Admitting defeat, Mitchell rose on the Senate floor and bluntly accused fellow senators, industry and environmentalists of rigidly pursuing their own interests at national expense.

"I recognize reality," he said, withdrawing his bill.

Eight months later, the reality has changed markedly. A new political equation in which Mitchell plays a pivotal role has taken shape, creating the best prospect in 12 years for major overhaul of the Clean Air Act—a law considered far-reaching, even radical when it was passed in 1970, but now regarded by many critics as crippled by concessions to special interest groups and halfhearted enforcement by the Environmental Protection Agency.

Mitchell became majority leader last November, replacing Sen. Robert C. Byrd (D-W.Va.), who blocked three of Mitchell's clean air bills in the 1980s for fear that acid rain provisions would endanger high-sulfur coal interests in West Virginia.

"There will be a debate and votes on clean air legislation in this Congress," Mitchell declared with confidence. "It is now clear we have to do something."

For a change, the White House does not disagree. President Bush, who plans to unveil his clean air package on Monday, met with congressional leaders yesterday at the White House to discuss his options. In an interview with outdoors writers earlier in the day, Bush said the congressional meeting was "the final step before I have to make a decision on acid rain, on

See AIR, A8, Col. 1

■ *President Bush says he expects Alaskan oil-spill cleanup to produce "good news" by fall.* *Page A7*

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BEST INTENTIONS

Remedies for Pollution Raise Divisive Questions of Allocating Cost

AIR, From A1

contaminants and several other key environmental issues."

Although Bush's advisers remain divided over the strength of the proposals, the introduction of any administration bill would break precedent with President Ronald Reagan, who initially tried to gut the law and, when he failed, simply abstained from legislative proposals.

In the House, Rep. John D. Dingell (D-Mich.), chairman of the Energy and Commerce Committee and patron saint of Detroit's auto industry, continues to oppose the tightening of tailpipe standards considered crucial to controlling urban smog.

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AMENDING THE CLEAN AIR ACT

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The Presidents

Reagan/Bush

The Senate Majority Leaders

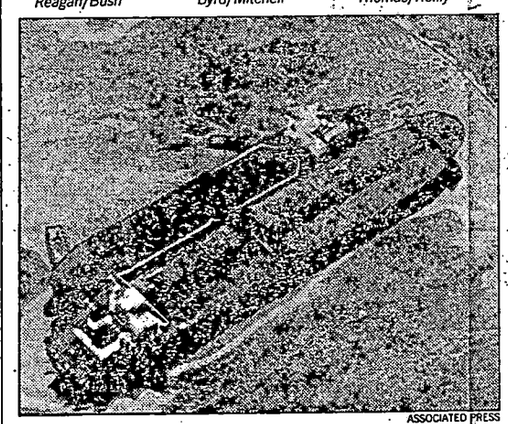
Byrd/Mitchell

The EPA Administrators

Thomas/Reilly

The Committee Chairman

Dingell



ASSOCIATED PRESS

Increased public awareness of environmental issues after the Valdez oil spill and last summer's weather have created more pressure to act.

BY MICHAEL DREW—THE WASHINGTON POST

The choice on this issue will be whether every industrial polluter should be automatically required to install the best technology in use regardless of cost and number of people exposed, as a Senate bill proposes, or whether the EPA should be given authority to determine in each case whether the investment can be justified in health benefits, as some Bush advisers prefer.

Another issue involves toxic releases during plant breakdowns. The Senate bill calls for regular inspections of plants to ensure that equipment is well-maintained. The House bill would require companies to report releases but would not require inspections.

Finally, there is the question of whether to require midwestern utilities that burn high-sulfur coal without technological controls and emit large quantities of sulfur dioxide.

But the consensus breaks down on three key issues: tonnage, timing and technique.

Environmentalists say reductions of 12 million tons of sulfur dioxide by the year 2000, or half of 1980 emissions, are necessary to prevent further damage to natural resources. Mitchell's bill last year started with the 12 million ton figure, but was whittled to 10 million to appease his opposition.

Although northeastern officials are willing to pick up some of the tab, westerners oppose a cost-sharing program because their utilities burn ample, low-sulfur coal that pollutes very little.

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Its members are major campaign donors, whose contributions to federal candidates have totaled more than $20 million since 1981, and they have various powers of persuasion. Automakers, for example, have built-in grass-roots organizations in their plants around the nation.

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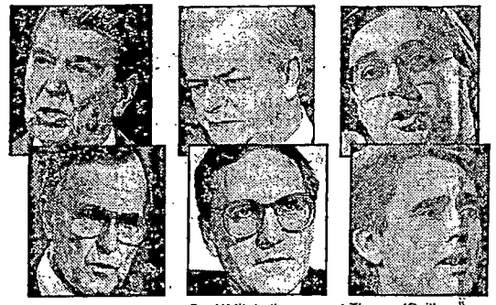
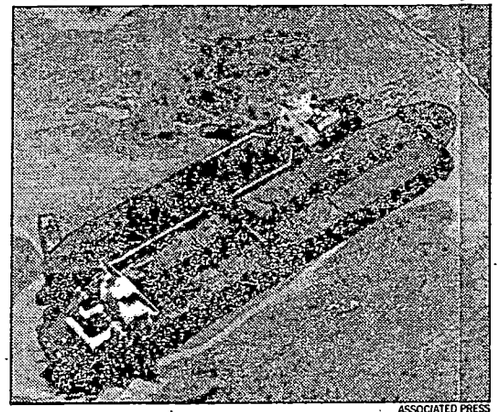
The debate over airborne toxins—chemicals the EPA has largely ignored despite their prevalence and the high risks of cancer, birth defects and genetic mutation they pose—is expected to focus on the level of technology required to control them.

THE CHANGING POLITICAL EQUATION





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Another issue involves toxic releases during plant breakdowns. The Senate bill calls for regular inspections of plants to ensure that equipment is well-maintained and for an independent government board to investigate accidental discharges.

The acid rain dispute is the most contentious, requiring a master of realpolitik to balance the interests. Every such bill has the same aim: to stop acid rain from killing forests and lakes in Canada and the Northeast. And every bill seeks to control the source of acid rain: midwestern utilities that burn high-sulfur coal without technological controls and emit large quantities of sulfur dioxide.

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Opposition comes from utilities, which want further study of acid rain before reducing emissions, and the United Mine Workers, which seeks to save jobs amid slackened demand for high-sulfur coal burned by midwestern plants and which has a powerful ally in Byrd.

The timing issue follows similar lines, with environmentalists calling for a 1998 deadline and utilities and finally come the questions of cost and implementation.

Because midwestern utilities erected tall smokestacks in the 1970s to disperse gases and avoid the expense of sulfur-cleaning devices, they are expected to bear most of the costs. But their representatives in Congress are trying to work out a plan to pass some of the costs to ratepayers in the rest of the country.

Although northeastern officials are willing to pick up some of the tab, westerners oppose a cost-sharing program because their utilities burn ample, low-sulfur coal that pollutes very little.

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"If a number of industries were picked off by the exemption process, it clearly makes it tougher," said Fay. "We want to make sure we speak with one voice."

Fay said that while he hopes to enforce the united front again this year, the CAWG is not opposed to clean air legislation that is "not only environmentally sound but economically sound."

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The Air Around the President

George Bush's campaign promise to pay more attention to the environment was welcome news after eight years of indifference from Ronald Reagan. He now faces a marvelous opportunity to match rhetoric with substance: the urgent need to revise the Clean Air Act of 1970, landmark legislation grown flaccid with age.

Mr. Bush has already listened to hours of conflicting advice. The forces arrayed against tightening the act are formidable. The President's forthcoming proposals will reveal much about his seriousness and also his political courage and ingenuity.

•

The 1970 law was a monument, passed early in the new era of environmental consciousness. There's no question that it has curbed air pollution. But even as amended in 1977, the law ignores some problems and hasn't kept pace with others. Three of five Americans now live in more than 100 urban areas that fail to meet Federal air quality standards — despite annual spending of $35 billion, mostly by the private sector, to control pollution.

Mr. Bush will have to address three forms of air pollution: acid rain, smog and toxic chemicals. Toxic pollution, involving some 300 different chemicals, is the most complex. The health hazards are difficult to measure. Mr. Bush may not be able to do more than urge a tightening of existing laws. But there's much he can do on the other fronts.

Acid Rain. The chief cause is the 20 million tons of sulfur dioxide that are emitted each year from smokestacks of coal-fired power plants in the Middle West. Utilities, citing costs, and high-sulfur-coal interests, citing possible job losses, have long opposed strict controls. For President Bush, the acid test on acid rain will be whether he can ignore the lobbyists and support his Environmental Protection Agency's Administrator, William Reilly, who recommends a 50 percent cut in sulfur dioxide emissions by the turn of the century.

Mr. Reilly's plan would set emission limits and let utilities decide how to meet them. They could invest in scrubbers to clean the emissions, switch to low-sulfur coal or use various exotic market incentives. These solutions won't be cheap. But they're sensible, and long overdue.

Smog Standards. About half the chemicals that contribute to smog come from stationary sources — backyard barbecues, dry cleaners, giant petrochemical plants. These can't easily be controlled from Washington. The trick will be to induce states to control them without relinquishing Federal oversight. And that means a new set of realistic but enforceable standards requiring states to show year-to-year improvements,

The other half of the smog problem is caused by cars and trucks. There's nothing good to be said for the hydrocarbons and nitrogen oxides that flow from the nation's 100 million tailpipes. They play a malignant role in urban pollution. And nitrogen oxides add significantly to acid rain. This means that if Mr. Bush is really serious about clean air, he'll have to tackle the auto and oil industries.

A two-stage response, supported by Mr. Reilly and Boyden Gray, the White House counsel, is now on Mr. Bush's desk. Stage one would rely on improvements in existing technology to make all cars and light trucks comply with the emission controls that California will require by 1993.

As more people drive more miles, however, the benefits from existing technology will dwindle. Thus the second stage would nudge the oil and automobile companies toward alternative fuels. One such fuel, natural-gas-based methanol, could cut harmful tailpipe emissions by an astounding 80 percent.

Both the oil and auto industries are howling. Why develop a car for which there is no readily available fuel? Why develop fuels for which there is no car? But they made the same complaints when Congress told them to develop unleaded fuel and cars that could run on it. Unleaded fuel is now the norm.

Special interest groups aside, the political climate seems hospitable to tougher laws. Environmental issues enjoy new popularity. The new Senate majority leader, George Mitchell, is a strong proponent of cleaner air; his predecessor was not. The missing ingredient for a decade is something George Bush can now supply: leadership from the White House.

Pakistan, India and The Bom

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Letters

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To the Editor:

Your analysis sition 103, which last November insurance rates Auto Insurance was off track. T Court struck tw lient parts of the

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Without Mechanism for Succession, Iran's Government Uncertain

By Patrick E. Tyler
Washington Post Foreign Service

TEHRAN, June 4 (Sunday)—Iran's Ayatollah Ruhollah Khomeini died last night following complications from intestinal surgery, Iranian radio announced this morning.

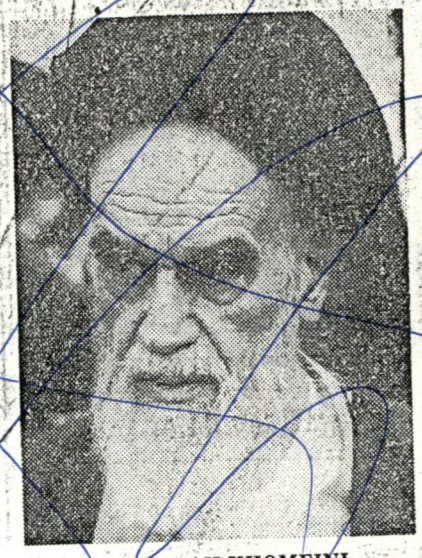
Khomeini's son, Ahmad, told Iranians of their leader's death in the first radio broadcast of the day, at 7 a.m., after doctors had announced Saturday that the 86-year-old cleric had weakened on the 12th day after an operation to correct internal bleeding. There were no further details of Khomeini's death and the radio began playing funeral music and verses from the Koran.

Khomeini's death left Iranians stunned this morning and uncertain about how their country was being governed. The often fractious political leadership here has been debating changes in the constitution to create a mechanism for political succession.

None of Iran's political or religious figures is in a position to assume the unique leadership role that Khomeini has fulfilled in the decade since he led the revolution that overthrew Shah Mohammed Reza Pahlavi. The lack of a succession mechanism has spread public anxiety in recent weeks that appeared to have deepened among the Tehran citizens who heard of Khomeini's death in the middle of the morning rush hour.

"I heard the news while I was in a

See KHOMEINI, A31, Col. 1



AYATOLLAH KHOMEINI
. . . fulfilled unique leadership role

BEST INTENTIONS
THE UNFULFILLED PROMISE OF THE CLEAN AIR ACT

Under EPA, a Regulatory Breakdown

Agency Made Concessions and Gave Exemptions to Polluters

First of four articles

By Michael Weisskopf
Washington Post Staff Writer

PHOENIX

Not so long ago the growth of this desert city was fueled by people like Bernie Bernstein, who left Chicago in 1952 because of sinus troubles and settled here at the recommendation of his physician.

But the clean, dry air that once was tonic for his sinuses has given way to a pall of pollution known as the "brown cloud" that seeps across the valley, obscuring pastel hues of the southwestern landscape and causing Bernstein's sinuses to sting and his chest to tighten.

The air here gets so foul now that Bernstein, 72, hardly ever leaves home, and his doctor recently made a familiar suggestion: Move to a town with better air.

"Air, A-I-R," said Bernstein, spitting out each letter. "Where can I go for clean air?"

Today few cities in America would qualify. None of the 26 largest metropolitan areas, from Phoenix to Washington, offers air clean enough to meet federal health standards. Pollution once limited to gritty industrial corridors has spread to oases for the hard-of-breathing, rural communities and the last few pristine niches of the country.

This is not the outcome envisioned 19 years ago when, in the aftermath of Earth Day and the environmental movement's first flowering, Congress enacted a sweeping, almost radical, package of legislation.

The Clean Air Act of 1970 was the rare

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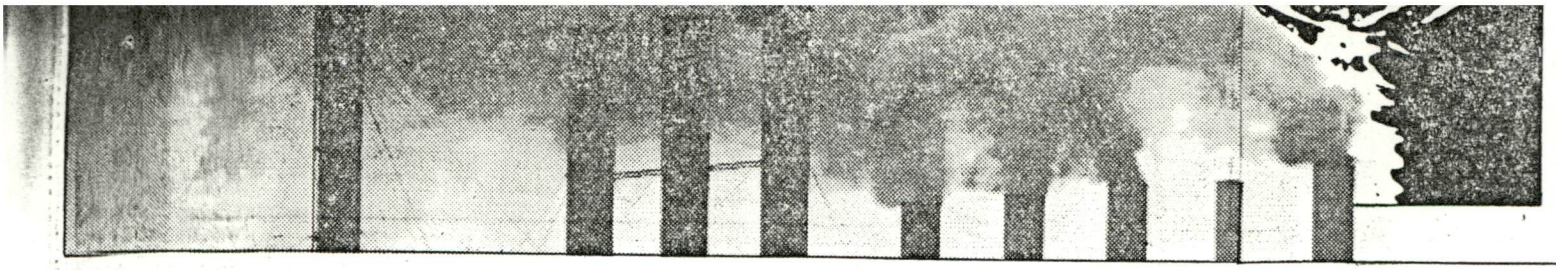


Under EPA, a Regulatory Breakdown

AIR, From A1

legislative solution to a pressing national problem, little compromised by industry or parochial political interests. It mandated more major changes of more major industries than any legislation in recent memory, replacing a hodgepodge of ineffective state laws with national, health-based standards for pollutants and specific deadlines for their reduction.

The measure's objective, according to then-Sen. Edmund S. Muskie (D-Maine), its chief sponsor, was no less than that "all Americans in all parts of the country shall have clean air to breathe within the 1970s." It was a law, he said, that "makes hard choices, provides just remedies, requires stiff penalties."

Nearly every American city breathes easier today because of the act. Black clouds of soot no longer darken most steel towns. And even Los Angeles is less smoggy than it was before automobile tailpipe controls. Pollution in Denver is half its 1970 levels.

The 210 million tons of pollution dumped into the air in 1970 have been cut by a third, despite population growth. Emissions of lead have been reduced 96 percent, large particles 62 percent and carbon monoxide 39 percent. Cars built since the early 1980s emit 90 percent less carbon monoxide and hydrocarbons than 1970 models and 75 percent less nitrogen dioxide.

Yet, as Congress prepares to rewrite air pollution laws at the beginning of another summer when environmental concerns are again in the forefront, the promise of the law—that "air in all parts of the country shall have no adverse effects on any American's health"—remains unfulfilled.

Because the hard choices mentioned by Muskie were not made, the Clean Air Act became over the years a textbook example of how the road to regulatory breakdown is paved with good intentions. And the implications are troubling, for the ineffectiveness of such an amibitious undertaking calls into question the ability of government to confront complex and far-reaching problems.

The Environmental Protection Agency, newly formed in 1970, failed under its first four presidents to implement large parts of the Clean Air Act and sidestepped congressional deadlines for other parts. It handed out delays, concessions and exemptions to whole classes of polluters.

And Congress, with neither the unified vision nor political will of 19 years ago, has been unable either to force the EPA to meet the the law's goals or strengthen the act, especially during the eight years of the Reagan administration.

Assessing the Clean Air Act today, scientists, public health officials and congressional critics cite these major failures:

- More than half the nation's population lives in areas where at least one of the six pervasive pollutants targeted by Congress—ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulates and lead—exceeds standards. Nearly 100 urban areas have excessive levels of ozone, whose effects on the lung now are compared to cigarette smoking. Average ozone levels rose 14 percent last year, even reaching pristine national parks. Emissions of nitrogen dioxide, a key ingredient of ozone and acid rain, also have increased.
- The standards the EPA set are too weak to protect the general population with an "adequate margin of safety," as the act requires, or are not structured effectively to safeguard the nation's 10 million asthmatics and others sensitive to pollutants.
- Only a handful of the hundreds of pollutants considered so perilous 19 years ago that Congress wanted them controlled at the source of emission are regulated, even though they cause cancer, birth defects, genetic mutations and other serious diseases.
- There is no standard for acid aerosols, tiny particles that carry the most toxic substances to the deepest part of the lung and are believed to cause up to 100,000 deaths a year and a significant number of hospital admissions.
- Indoor pollutants, whose concentrations are magnified many times in airtight houses and offices where Americans spend the vast majority of their time, and pesticides, which permeate agricultural communities, are not regulated by the EPA.
- Despite damage caused by acid rain to forests and thousands of rivers and lakes on the East Coast, the midwestern utilities believed to be the major cause are allowed to avoid controls on emissions of the key ingredient: sulfur dioxide.
- There are no controls on carbon dioxide, the coal-combustion gas that traps solar heat like a "greenhouse" and is responsible for the threat posed by global warming.

Spokesmen for the EPA adopt a "better-than-nothing defense of their record. According to Deputy Assistant EPA Administrator Don Clay, the nation's air is "a lot cleaner" today than 19 years ago and is purer than that in most foreign cities. While portions of the act remain unfulfilled, Clay said, "We have made a lot of progress."

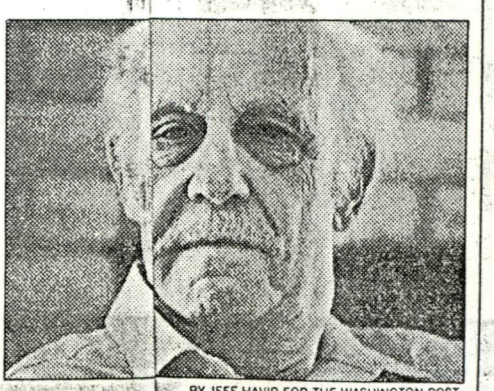
Industry takes a similar view. "The experience since 1970 demonstrates you can still have economic growth and healthy air," said Terry Yosie, vice president of the American Petroleum Institute.

But many independent scientists look back at the period as one of lost opportunity.

"The EPA was given a good piece of legislation 19 years ago and never carried it out," said Filip J. Landrigan, director of environmental and occupational medicine at the Mount Sinai School of Medicine in New York. "They failed to enforce existing regulations and to develop new ones. The system is running ragged. It's breaking down."

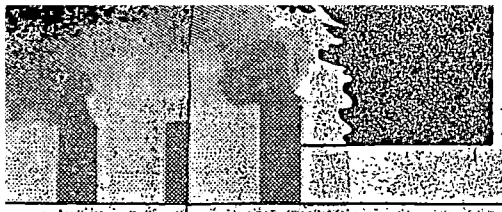
Like Landrigan, many critics cast less blame for the failure on the act than on its implementers. In their view, the EPA lacked the resolve to carry out its mission once power passed to politicians who were on the sidelines of Earth Day and their allies in industry.

After Muskie, the most dominant political forces on clean air issues fought to weaken, not strengthen, the act. Rep. John D. Dingell (D-Mich.), from his powerful post as chairman of the House Energy and Commerce Committee, has fought to protect Detroit's automakers. Sen. Robert C. Byrd



BY JEFF HAVIR FOR THE WASHINGTON POST

Phoenix's "brown cloud" keeps Bernie Bernstein, with sinus trouble, mostly indoors.



year that the number of potential victims—300,000 people—is too small to warrant adoption of a short-term standard. The agency also has not addressed the role the compound plays in forming acid rain and acid aerosols.

regulated pollutants are controlled.

The seven are asbestos, benzene, beryllium, cadmium, mercury, radionuclides and vinyl chloride. Of the unregulated substances, 53 are believed to cause cancer and 145 to cause fetal damage.

Breakdown

heat like a greenhouse" and is responsible for the threaposed by global warming.

Spokesme for the EPA adopt a "better-than-nothing defense of their record. According to eputy Assistant EPA Administrator Don Clay, the nation's air is "a lot cleaner" tod than 19 years ago and is purer than thain most foreign cities. While portions of e act remain unfulfilled, Clay said, "We mae a lot of progress."

Industry kes a similar view. "The experience sin 1970 demonstrates you can still have ecomic growth and healthy air," said Terry osie, vice president of the American Proleum Institute.

But many dependent scientists look back at the periods one of lost opportunity.

"The EPA was given a good piece of legislation 19 ars ago and never carried it out," said Filip J. Landrigan, director of environmenll and occupational medicine at the Mount Sai School of Medicine in New York. "They ailed to enforce existing regulations and o develop new ones. The system is runnig ragged. It's breaking down."

Like Landigan, many critics cast less blame for th failure on the act than on its implementes. In their view, the EPA lacked the solve to carry out its mission once power assed to politicians who were on the sidelins of Earth Day and their allies in industry.

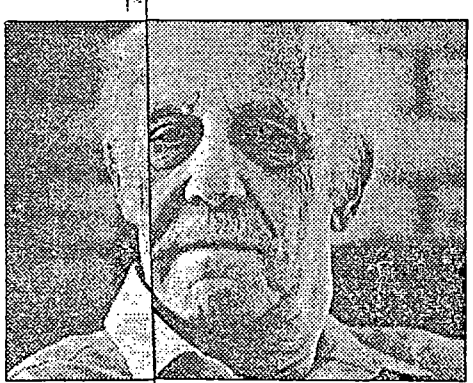
After Muse, the most dominant political forces on clen air issues fought to weaken, not strengthn, the act. Rep. John D. Dingell (D-Mich., from his powerful post as chairman of he House Energy and Commerce Committee, has fought to protect Detroit's autmakers. Sen. Robert C. Byrd (D-W.Va.), sensitive to the high-sulfur coal interests in his state, killed any hopes of acid-rain legislation in his reign as Senate majority leader from 1977 to 1988.

And President Ronald Reagan, after failing in 1981 to dismantle important parts of the act, spent two terms undoing regulations that he believed stood in the way of economic growth.

The impact can be seen in the wide, destructive sweep of air pollution.

The path starts in New England, where a soup of acid rain, ozone and toxic fog has withered great forests of sugar maple and red spruce.

The damage moves south, to the mid-Atlantic and southeastern states where thousands of streams are so acidified by pollution that they are in danger of dying, to the bayous of Louisiana, where airborne toxics are blamed for high rates of miscarriage.



BY JEFF HAVIR FOR THE WASHINGTON POST

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Childhood Asthma 18% Higher

In the Midwest, the children of sooty Steubenville, Ohio, suffer twice the rate of coughs, bronchitis and chest illness as youngsters in less polluted cities. Downwind from a high-sulfur oil refinery in a suburb of St. Paul, Minn., the rate of childhood asthma is 18 percent higher than the state average.

And it moves finally to the Southwest, where Bernstein and millions of others once went in search of clean air and where Joanne Gersten, an epidemiologist with the Arizona Department of Health Services now says, "It would be very difficult for me to recommend [Phoenix] for people with lung disease. I have a suspicion they die at an earlier age here because of the pollution assault."

Phoenix violates air quality standards not only for ozone and carbon monoxide but also for particulates, tiny particles of soot, smoke and sand that vehicles help to create by burning impurities in diesel fuel and grinding up road dirt. The health and regulatory problems here are typical of most big cities clogged with cars, including Washington, which exceeds health standards for ozone and carbon monoxide.

Studies by the Arizona health department show that Phoenix's death rate from respiratory disease is significantly higher than less polluted parts of the state, that cardiac deaths in one Phoenix neighborhood rise significantly in months when carbon monoxide levels rise, and that residents of a particularly polluted section of Phoenix suffer 20 percent more headaches, coughs, sore throats, malaise and shortness of breath—symptoms typical of carbon monoxide and particulate exposure—than residents of a community with cleaner air.

"It affects the well-being of everyone in the valley," said Bernard E. Levine, a prominent pulmonary specialist here.

Bernstein, a retired businessman now suffering from heart as well as sinus trouble, gauges his well-being by the size of the "brown cloud" caused by ozone combining with particulates that hovers over Phoenix most days. On mornings when the smoky mixture is thick enough to ring the base of South Mountain, he said, "you better be careful."

State governments get most of the blame for the widespread failure to meet air quality standards. The Clean Air Act requires them to plan for implementation, maintenance and enforcement of the regulations.

But Congress recognized the limits of local governments in regulating the activities of local industry. Under clean air legislation before 1970, states had responsibility to curb air pollution inside their borders and very little was done. That is why the EPA was deputized in 1970 to take control of the planning process and oversee state efforts.

States were still supposed to work out plans locally so they could meet the standards by 1975. The EPA was supposed to make sure the plans were realistic and realized, armed with the power to freeze federal grants, ban construction of new industry and impose its own cleanup program.

But the EPA approved plans with overly optimistic goals, and when states failed to live up to the plans, the agency did not use its leverage to bring laggards into line.

Although the 1975 deadline was extended and scores of cities are far from compliance, the EPA only rarely has imposed a federal program to reduce emissions from motor vehicles or factories. Environmentalists say federal intervention is the only way some cities will ever clean up.

In 1977, Congress set a new deadline of 1982 for polluted cities, with a five-year extension possible for the most intractable violators. Once again, the states projected overly rosy scenarios, and the Reagan EPA readily acceded.

Nancy Wrona, assistant director of Arizona's Department of Environmental Quality, calls the planning process a "paper exercise." The EPA showed little discretion in approving an overly confident plan for Phoenix, she said, and little in follow-up.

"You look at who had come into compliance by 1982 and you realize the approach EPA was taking didn't work," she said. "And all they said was, 'Do more planning.' "

NEXT: Tall stacks and politics