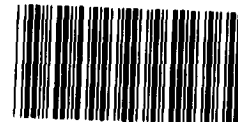


091108

FOR RELEASE ON DELIVERY  
EXPECTED AT  
JUNE 30, 1981

STATEMENT OF  
DAVID L. JONES, SENIOR GROUP DIRECTOR  
COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE  
SENATE COMMITTEE ON ENVIRONMENT AND  
PUBLIC WORKS



091108

ON  
THE INTERSTATE TRANSPORT OF  
SULFUR DIOXIDE AND TOTAL SUSPENDED  
PARTICULATES

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

WE ARE HERE TODAY AT YOUR REQUEST TO DISCUSS THE LIMITATIONS OF THE CLEAN AIR ACT IN ADDRESSING THE PROBLEM OF INTERSTATE TRANSPORT OF SULFUR DIOXIDE AND TOTAL SUSPENDED PARTICULATES. THE CLEAN AIR ACT, AS AMENDED IN 1970, RECOGNIZED THAT POLLUTANTS EMITTED IN ONE STATE COULD ADVERSELY AFFECT AIR QUALITY IN ANOTHER STATE. IN ENACTING THE 1977 AMENDMENTS, THE CONGRESS DETERMINED THAT THE 1970 AMENDMENTS HAD NOT PROVIDED ADEQUATE PROTECTION AGAINST THE INTERSTATE TRANSPORT OF POLLUTION. ACCORDINGLY, THE CONGRESS INCREASED THE ENVIRONMENTAL PROTECTION AGENCY'S (EPA'S) AUTHORITY TO DEAL WITH THE PROBLEM. THE AMENDMENTS REVISED SECTION 110(a)(2)(E) OF THE ACT TO REQUIRE THAT EPA APPROVE A STATE IMPLEMENTATION PLAN ONLY IF:

"\* \* \*IT CONTAINS ADEQUATE PROVISIONS \* \* \* PROHIBITING ANY STATIONARY SOURCE WITHIN THE STATE FROM EMITTING ANY AIR POLLUTANT IN AMOUNTS WHICH WILL (I) PREVENT ATTAINMENT OR MAINTENANCE BY ANY OTHER STATE OF [AN] AMBIENT AIR QUALITY STANDARD, OR (II) INTERFERE WITH MEASURES REQUIRED TO BE INCLUDED IN THE APPLICABLE IMPLEMENTATION PLAN FOR ANY

7/25/81

OTHER STATE\* \* \*TO PREVENT SIGNIFICANT DETERIORATION OF  
AIR QUALITY OR TO PROTECT VISIBILITY \* \* \*"

MANY STATES STILL BELIEVE, HOWEVER, THAT THEY ARE ADVERSELY  
AFFECTED BY THE INTERSTATE TRANSPORT OF POLLUTANTS.

FACTORS WHICH HAVE HAMPERED EFFORTS TO IMPLEMENT THE CLEAN  
AIR ACT PROVISIONS FOR ADDRESSING THE PROBLEM INCLUDE

- EPA'S LIMITED TECHNICAL CAPABILITY TO ACCURATELY IDENTIFY AND  
ASSESS THE PROBLEM OF INTERSTATE TRANSPORT OF POLLUTANTS,  
PARTICULARLY IN THE SCIENCE OF AIR QUALITY MODELING;
- THE BROAD LANGUAGE OF THE ACT WHICH MAKES IT DIFFICULT TO  
DEAL WITH SPECIFIC SITUATIONS, AND
- LACK OF EPA REGULATIONS TO CLARIFY THE LANGUAGE OF THE 1977  
AMENDMENTS.

IN SHORT, THE INTERSTATE TRANSPORT OF HARMFUL POLLUTANTS CON-  
TINUES TO BE A MAJOR ENVIRONMENTAL PROBLEM AND IS THE CAUSE OF NUMER-  
OUS DISPUTES BETWEEN STATES, INDUSTRIES, AND EPA AS TO WHAT NEEDS TO  
BE DONE TO EFFECTIVELY RESOLVE IT.

OUR OBSERVATIONS CONCERNING THE PROBLEM ARE BASED ON DISCUS-  
SIONS WITH EPA PROGRAM MANAGERS AND RESEARCHERS, ENVIRONMENTAL  
GROUPS, AND STATE OFFICIALS. WE HAVE DISCUSSED OUR VIEWS WITH  
EPA OFFICIALS AND THEY ARE IN GENERAL AGREEMENT.

#### AIR QUALITY MODELING PROBLEMS

TO DETERMINE IF A SOURCE OF POLLUTION IS ADVERSELY AFFECTING  
AIR QUALITY IN ANOTHER STATE, IN VIOLATION OF THE PROHIBITIONS  
OF THE ACT, EPA USES AIR QUALITY MODELS. MODELING CAPABILITIES  
ARE LIMITED, HOWEVER, AND PROBLEMS ARE ASSOCIATED WITH THEIR USE.

ONE BASIC PROBLEM IS DECIDING WHICH MODEL TO USE; EPA HAS  
APPROVED SEVERAL MODELS FOR USE IN DIFFERENT SITUATIONS. FOR  
EXAMPLE, EPA GUIDELINES RECOMMEND ONE TYPE OF MODEL FOR USE IN

MODELING EMISSIONS FROM A SINGLE SOURCE WHERE THERE ARE NO MAJOR METEOROLOGICAL OR TERRAIN VARIABLES. ANOTHER EPA-APPROVED MODEL IS RECOMMENDED FOR MODELING THE SHORT TERM EFFECTS OF MULTIPLE SOURCES. HOWEVER, EPA APPROVED MODELS MAY NOT BE APPLICABLE FOR EVERY SITUATION.

ANOTHER MODELING WEAKNESS IS THE NEED FOR ASSUMPTIONS WHERE ACTUAL DATA IS NOT AVAILABLE. PROHIBITED INTERSTATE TRANSPORT OF POLLUTANTS IS MOST LIKELY TO OCCUR DURING THE WORST COMBINATION OF METEOROLOGICAL AND OPERATING CONDITIONS. ACTUAL DATA ON THESE CONDITIONS IS OFTEN NOT AVAILABLE AND ASSUMPTIONS ABOUT THEM HAVE TO BE MADE. THE CHOICE OF THESE ASSUMPTIONS CAN LEAD TO CONTROVERSY. FOR EXAMPLE, IN ONE DISPUTE THE AIR QUALITY MODEL USED BY ONE STATE IN ITS PETITION AGAINST ANOTHER STATE, ASSUMED METEOROLOGICAL CONDITIONS THAT WOULD CAUSE EMISSIONS TO DROP TO GROUND LEVEL BEFORE THEY COULD DISPERSE. BASED ON THESE ASSUMPTIONS, THE MODEL PREDICTED A VIOLATION OF AN AMBIENT AIR QUALITY STANDARD. THE ASSUMPTIONS WERE CHALLENGED, HOWEVER, BY THE AFFECTED STATE, WHICH CLAIMED THAT APPLYING SUCH ASSUMPTIONS WAS NOT VALID OR REALISTIC.

PERHAPS THE MOST SERIOUS DEFICIENCY OF MODELS, HOWEVER, IS THEIR LACK OF ACCURACY. AN EPA MODELING EXPERT TOLD US THAT EVEN AT LOCATIONS VERY CLOSE TO THE SOURCE BEING MODELED, ACTUAL CONCENTRATIONS OF A POLLUTANT CAN VARY 50 TO 200 PERCENT FROM THOSE PREDICTED BY AN EPA APPROVED MODEL. MODELS BECOME LESS ACCURATE AS THE DISTANCE BETWEEN THE SOURCE AND THE POINT OF IMPACT INCREASES. MOREOVER, AT GREATER DISTANCES, THE EMISSIONS FROM MANY SOURCES CAN MERGE. MODELING THE IMPACT OF AN INDIVIDUAL SOURCE FROM AMONG THESE MERGED EMISSIONS IS VERY INACCURATE AT LONG RANGE. FOR INSTANCE, EPA APPROVED TOTAL SUSPENDED PARTICULATES (TSP) AND

SULFUR DIOXIDE (SO<sub>2</sub>) MODELS HAVE A RANGE OF ONLY ABOUT 30 MILES.

IMPROVING A MODEL'S ACCURACY REQUIRES THAT IT BE VALIDATED. VALIDATION INVOLVES GATHERING LARGE VOLUMES OF DATA ON WEATHER CONDITIONS AND ACTUAL POLLUTANT CONCENTRATIONS. THE MODEL'S PREDICTED VALUES ARE THEN COMPARED TO THE ACTUAL CONCENTRATIONS MEASURED, AND THE MODEL IS REFINED. BECAUSE LARGE AMOUNTS OF DATA MUST BE GATHERED, VALIDATION IS VERY EXPENSIVE. VALIDATING MODELS FOR LONGER RANGE IS EVEN MORE EXPENSIVE BECAUSE MORE DATA IS NEEDED.

IN ADDITION TO PROBLEMS OF RANGE AND MULTIPLE SOURCES, UNKNOWNNS ABOUT THE CONVERSION OF SULFUR DIOXIDE TO SULFATES MAKE IT DIFFICULT FOR MODELS TO QUANTIFY THE LONG RANGE IMPACTS OF SULFUR DIOXIDE EMISSIONS. AN EPA MODELING EXPERT TOLD US THAT MODELS DEALING WITH CONVERSION NEED MORE REFINEMENT BEFORE THEY CAN BE APPROVED FOR REGULATORY PURPOSES. EPA OFFICIALS STATED THAT THEY KNOW TRANSPORT AND CONVERSION IS OCCURRING, BUT THEY CANNOT QUANTIFY THE IMPACT OF A PARTICULAR SOURCE ON AMBIENT SULFATE LEVELS FAR DOWNWIND.

PROBLEMS APPLYING THE ACT  
TO SPECIFIC DISPUTES

MOST OF THE CURRENT INTERSTATE DISPUTES INVOLVE COMPLEX ISSUES WHICH THE BROAD LANGUAGE OF THE ACT DOES NOT SPECIFICALLY ADDRESS. IN SOME CASES, RESOLUTION OF THESE DISPUTES MAY FORCE EPA TO MAKE CONTROVERSIAL INTERPRETATIONS OF THE ACT. IN OTHERS, EPA HAS BEEN ABLE TO AVOID SENSITIVE DECISIONS BECAUSE MODELS CANNOT QUANTIFY AN INTERSTATE IMPACT. HOWEVER, THE ISSUES REMAIN AND WILL NEED TO BE DECIDED EVENTUALLY.

FOR INSTANCE, THE ACT PROHIBITS POLLUTION TRANSPORT THAT PREVENTS ATTAINMENT AND MAINTENANCE OF AN AMBIENT AIR QUALITY STANDARD IN ANOTHER STATE. HOWEVER, NEITHER THE ACT NOR EPA REGULATIONS

EXPLAIN WHETHER AN OUT-OF-STATE SOURCE CONTRIBUTING TO AN AIR QUALITY STANDARD VIOLATION IN ANOTHER STATE IS CONSIDERED TO BE A VIOLATION OF THE ACT IF IN-STATE SOURCES ALSO CONTRIBUTE TO THE VIOLATION.

THE ACT ALSO PROHIBITS A SOURCE OF POLLUTION FROM INTERFERING WITH ANOTHER STATE'S PREVENTION OF SIGNIFICANT DETERIORATION (PSD) MEASURES, BUT THE ACT DOES NOT ELABORATE ON THIS PROHIBITION. FOR EXAMPLE, IT DOES NOT SPECIFY THE AMOUNT OF A PSD INCREMENT THAT CAN BE USED UP BY AN OUT-OF-STATE SOURCE.

#### LACK OF EPA REGULATIONS

EPA HAS ISSUED NO REGULATIONS SPECIFYING HOW STATES ARE TO COMPLY WITH THE ACT'S REQUIREMENTS CONCERNING INTERSTATE TRANSPORT OF POLLUTANTS IN INDIVIDUAL STATE IMPLEMENTATION PLANS REQUIRED UNDER SECTION 110(A)(2)(E) OF THE ACT. OUR REVIEW OF EPA REGIONAL OFFICE AND STATE FILES FOR NINE NORTHEASTERN AND MIDWESTERN STATES DISCLOSED THAT ONLY ONE PLAN CONTAINED PROVISIONS SPECIFICALLY ADDRESSING THE ACTIONS IT PLANNED TO TAKE SO THAT SOURCES IN THAT STATE DID NOT ADVERSELY AFFECT OTHER STATES. EPA OFFICIALS ACKNOWLEDGED THAT THEY DO NOT REQUIRE SUCH PROVISIONS IN STATE PLANS BUT SAID THAT THEY COMPLY WITH THE ACT'S REQUIREMENT BY IGNORING STATE BOUNDARIES WHEN A SOURCE IS MODELED TO DETERMINE IF IT CAUSES A VIOLATION OF AMBIENT STANDARDS. HOWEVER, MANY EXISTING SOURCES HAVE NEVER BEEN MODELED TO ESTABLISH EMISSION LIMITS, AND THE LACK OF REGULATIONS ADDRESSING INTERSTATE TRANSPORT OF POLLUTANTS GIVES THE STATES NO IMPETUS TO IDENTIFY AND CORRECT INSTANCES OF SUCH TRANSPORT.

QUESTIONS REGARDING THE AMOUNT AND CIRCUMSTANCES OF INTER-STATE POLLUTION TRANSPORT THAT VIOLATE THE PROHIBITIONS OF THE ACT REMAIN UNANSWERED AND THEREFORE HAVE HINDERED THE EFFECTIVE

IMPLEMENTATION OF THE ACT. EPA OFFICIALS TOLD US THAT THEY HAVE NOT ISSUED REGULATIONS ANSWERING THESE QUESTIONS BECAUSE THEY INVOLVE COMPLEX ISSUES WHICH ARE DIFFICULT TO ADDRESS AND BECAUSE MODELING LIMITATIONS--TECHNICAL LIMITATIONS; UNCERTAINTY AS TO WHICH MODEL TO USE; AND USE OF QUESTIONABLE ASSUMPTIONS--WOULD HINDER EFFECTIVE IMPLEMENTATION OF THE REGULATIONS. ONE OFFICIAL ALSO TOLD US THAT EPA CANNOT RESOLVE THESE ISSUES ENTIRELY ON ITS OWN AND THAT CONGRESSIONAL ACTION IS NEEDED.

INTERSTATE TRANSPORT REMAINS  
A MATTER OF CONCERN

DESPITE THE STRONGER PROVISIONS OF THE 1977 AMENDMENTS, SOME STATE AIR POLLUTION CONTROL OFFICIALS BELIEVE A PORTION OF THE AIR POLLUTION IN THEIR STATES RESULTS FROM SULFUR DIOXIDE AND PARTICULATES EMITTED OUTSIDE THEIR BORDERS AND BEYOND THEIR CONTROL. IN SOME CASES THE STATE OFFICIALS ARE CONCERNED ABOUT A MAJOR SOURCE OR SOURCES (PRIMARILY FOSSIL FUEL POWER PLANTS, STEEL MILLS AND PRIMARY METAL-PROCESSING PLANTS) JUST OUTSIDE THEIR BORDERS. IN OTHERS, THEY ARE CONCERNED ABOUT POLLUTION TRANSPORTED LONG DISTANCES. SUCH CONCERN WAS REFLECTED IN A RESOLUTION ADOPTED AT A FEBRUARY 1981 MEETING OF THE NATIONAL GOVERNORS' ASSOCIATION STATING THAT LONG RANGE AIR POLLUTION TRANSPORT CREATES PROBLEMS IN MANY PARTS OF THE COUNTRY.

MANY COMPLAINTS OF INTERSTATE TRANSPORT ARE AIMED AT SOURCES IN THE MIDWEST. SEVERAL MIDWESTERN STATES HAVE HIGHER SULFUR DIOXIDE EMISSION LIMITS THAN OTHER STATES, TO ALLOW SOURCES TO BURN LOCALLY AVAILABLE HIGH SULFUR COAL WITHOUT CONTROLS OR WITH MINIMAL CONTROLS.

THE NORTHEASTERN STATES ARE VERY CONCERNED ABOUT HIGH SULFUR EMISSIONS IN THE MIDWEST (SEE EMISSIONS MAP, ATTACHMENT I). AIR

QUALITY OFFICIALS IN THE NORTHEASTERN STATES BELIEVE THE SULFUR DIOXIDE CONVERTS TO SULFATES (A TYPE OF PARTICULATE MATTER) AS IT TRAVELS, INCREASING THE AMBIENT PARTICULATE LEVELS AND CAUSING ACID RAIN AND SULFATE DEPOSITS IN THEIR STATES.

OFFICIALS IN OTHER STATES, SUCH AS PENNSYLVANIA AND WEST VIRGINIA, ARE CONCERNED ABOUT WHAT THEY PERCEIVE TO BE INEQUITIES IN EMISSION LIMITS AMONG NEIGHBORING STATES. OHIO HAS HIGHER SULFUR DIOXIDE EMISSION LIMITS THAN PENNSYLVANIA AND WEST VIRGINIA. FOR THIS REASON, PENNSYLVANIA AND WEST VIRGINIA ARE UNDER PRESSURE FROM SOURCES IN THEIR STATES TO RELAX EXISTING SULFUR DIOXIDE LIMITS. (SEE COMPARATIVE EMISSION LIMITS IN ATTACHMENT II.) IN 1976 THE GOVERNOR OF WEST VIRGINIA ISSUED AN EXECUTIVE ORDER DIRECTING THAT EXISTING SULFUR DIOXIDE REGULATIONS NOT BE ENFORCED. THIS ACTION WAS TAKEN IN RESPONSE TO PERCEPTIONS, ON THE PART OF WEST VIRGINIA, THAT IT WAS OVERLY BURDENED BY HIGH EMISSION LIMITS ALLOWED BY EPA IN NEIGHBORING STATES.

SINCE THE 1977 AMENDMENTS MADE IT POSSIBLE FOR STATES TO PETITION EPA CONCERNING THE TRANSPORT OF POLLUTANTS FROM OTHER STATES, SIX STATES HAVE FILED A TOTAL OF EIGHT PETITIONS CLAIMING THEY WERE BEING HURT BY INTERSTATE TRANSPORT OF POLLUTANTS. ALL OF THESE CASES INVOLVE THE ALLEGED TRANSPORT OF SULFUR DIOXIDE OR PARTICULATE EMISSIONS. THE DETAILS OF THESE PETITIONS ARE PRESENTED IN ATTACHMENT III. IN ADDITION, AT LEAST THREE LAWSUITS HAVE BEEN FILED AGAINST EPA REGARDING INTERSTATE TRANSPORT.

#### ISSUES FOR CONSIDERATION

SEVERAL FUNDAMENTAL YET COMPLEX TECHNICAL AND POLICY ISSUES ARISE WHEN REVIEWING THE PROBLEM OF HOW TO EFFECTIVELY ADDRESS INTERSTATE TRANSPORT OF POLLUTANTS. WHILE WE OFFER NO SPECIFIC RECOMMENDATIONS AS TO WHICH COURSE OR COURSES OF ACTION MIGHT

RESOLVE THESE ISSUES, WE DO WANT TO MENTION SOME OF THE IDEAS/  
APPROACHES PRESENTED BY VARIOUS STATE OFFICIALS AND RESEARCHERS  
TO US DURING OUR REVIEW.

MAJOR POLICY ISSUES WHICH WE BELIEVE NEED TO BE RESOLVED INCLUDE

--HOW MUCH INTERSTATE TRANSPORT OF A PARTICULAR POLLUTANT CON-  
STITUTES THE PREVENTION OF ATTAINMENT AND MAINTENANCE OF AN  
AIR QUALITY STANDARD?

--HOW MUCH INTERSTATE TRANSPORT CONSTITUTES INTERFERENCE  
WITH A STATE'S PREVENTION OF SIGNIFICANT DETERIORATION  
MEASURES?

--EMISSION RATES ALLOWED BY THE STATES INVOLVED IN INTER-  
STATE TRANSPORT DISPUTES CAN BE SIGNIFICANTLY DIFFERENT.  
SHOULD SUCH DIFFERENCES BE CONSIDERED IN DECIDING WHETHER  
INTERSTATE TRANSPORT VIOLATES THE ACT?

--SHOULD INTERSTATE TRANSPORT BE ALLOWED TO CONSUME A STATE'S  
"GROWTH MARGIN" ACHIEVED BY A STATE WHICH HAS HISTORICALLY  
REQUIRED CONTROLS STRICTER THAN REQUIRED TO ACHIEVE AND  
MAINTAIN AN AIR QUALITY STANDARD?

HOWEVER, EVEN IF THE ABOVE POLICY ISSUES ARE RESOLVED, THE  
CURRENT TECHNICAL LIMITATIONS OF MODELING WILL CONTINUE TO HAMPER  
THE EFFECTIVE USE OF VARIOUS SECTIONS OF THE ACT TO RESOLVE COM-  
PLAINTS ABOUT LONG RANGE SULFUR DIOXIDE TRANSPORT SUCH AS THOSE  
MADE ABOUT MIDWESTERN SOURCES BY THE NORTHEASTERN STATES. WE  
WERE TOLD THOUGH, THAT THERE ARE SEVERAL WAYS OF REDUCING TOTAL  
SULFUR DIOXIDE EMISSIONS WITHOUT RELYING ON MODELING. HOWEVER,  
SOME OF THE ALTERNATIVE POLICIES DISCUSSED BELOW MAY REQUIRE  
CHANGES IN THE ACT.

--SHOULD NATIONAL EMISSIONS STANDARDS BE ESTABLISHED? SUCH  
AN APPROACH WOULD REQUIRE ALL SIMILAR SOURCES TO MEET



SOME MINIMUM SULFUR DIOXIDE EMISSION LIMIT, EVEN IF IT IS MORE STRINGENT THAN NECESSARY TO ATTAIN THE AIR QUALITY STANDARD IN THE IMMEDIATE VICINITY. SOURCES LOCATED IN AREAS WITH SERIOUS AIR QUALITY PROBLEMS WOULD BE REQUIRED TO MEET STRICTER STANDARDS ESTABLISHED BY STATE AGENCIES, IF THEY ARE NEEDED TO MAINTAIN THE STANDARD. IT IS SUGGESTED THAT SUCH AN APPROACH WOULD MINIMIZE THE INEQUITY ALLEGEDLY CAUSED BY VASTLY DIFFERENT EMISSION LIMITS ON TWO SIDES OF STATE BORDERS. A DISADVANTAGE OF SUCH AN APPROACH IS THE FACT THAT SOME ISOLATED SOURCES THAT HAVE NO APPARENT ADVERSE IMPACT, WILL HAVE TO ADD EXPENSIVE CONTROLS WHICH COULD INCREASE THE COST OF THE PRODUCT OR SERVICE PROVIDED BY THESE SOURCES.

--SHOULD REGIONAL EMISSION STANDARDS BE ESTABLISHED? SINCE MOST OF THE SULFUR DIOXIDE SOURCES ALLEGEDLY CAUSING LONG RANGE INTERSTATE IMPACTS ARE LOCATED IN THE MIDWEST, REGIONAL SULFUR DIOXIDE EMISSION STANDARDS MAY BE MORE APPROPRIATE THAN NATIONAL STANDARDS. ESTABLISHING REGIONAL BOUNDARIES, HOWEVER, COULD BE A PROBLEM, AND STATES THAT HAVE TO IMPOSE EMISSION REDUCTIONS ON THEIR SOURCES FOR THE BENEFIT OF DOWNWIND STATES MIGHT FEEL THEY ARE BEING TREATED INEQUITABLY. A VARIATION OF THIS APPROACH WOULD ESTABLISH EMISSION STANDARDS ONLY FOR CATEGORIES OF SOURCES EMITTING THE MOST SULFUR DIOXIDE. FOR EXAMPLE, IT MIGHT BE MORE PRACTICAL TO ESTABLISH STANDARDS ONLY FOR POWERPLANTS AND, POSSIBLY, SMELTERS.

--SHOULD CURRENT AIR QUALITY CONTROL REGIONS (AQCR) BE EXTENDED? ANOTHER ALTERNATIVE IS THE EXPANSION OF AQCR'S WHICH CURRENTLY ARE RELATIVELY SMALL GEOGRAPHICAL AREAS,

TO COVER MUCH LARGER AREAS OF THE COUNTRY. FOR EXAMPLE, AN AQCR COULD INCLUDE THE MIDWEST OR THE MIDWEST AND THE NORTHEAST. IF ANY PART OF THE AQCR IS VIOLATING THE SULFUR DIOXIDE NATIONAL AMBIENT AIR QUALITY STANDARD, ALL MAJOR SOURCES COULD BE REQUIRED TO REDUCE THEIR EMISSIONS. HOWEVER, PROBLEMS SIMILAR TO THOSE ASSOCIATED WITH A REGIONAL EMISSION STANDARD MAY BE EXPERIENCED.

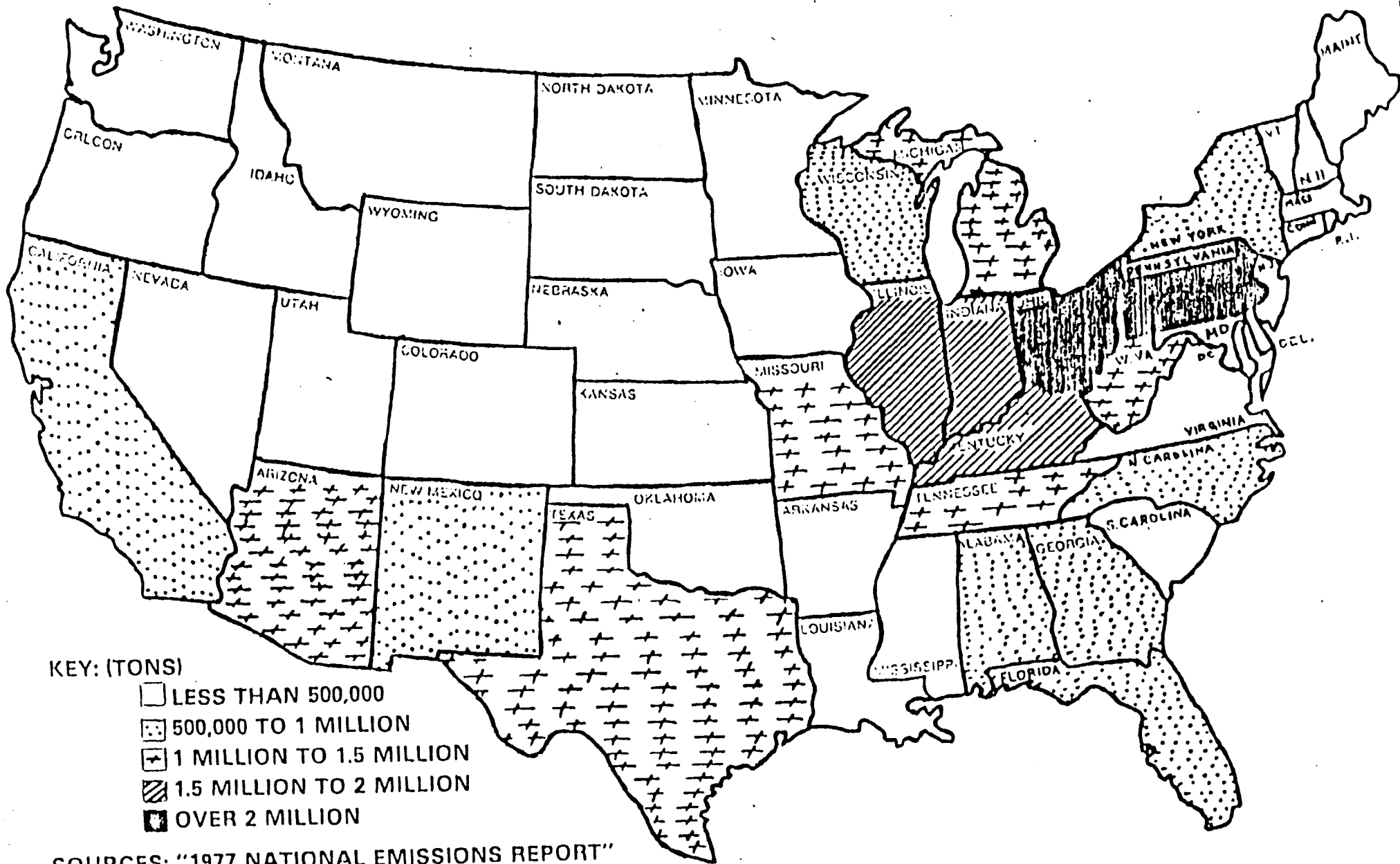
--SHOULD LIMITS BE ESTABLISHED ON STATE SULFUR DIOXIDE EMISSIONS? ANOTHER APPROACH IS TO LIMIT SULFUR DIOXIDE EMISSIONS ALLOWED IN EACH STATE. UNDER THIS APPROACH, THE STATE WOULD DETERMINE WHICH SOURCES TO SUBJECT TO STRICT CONTROLS IN ORDER FOR THE STATE'S TOTAL POLLUTION LOADINGS TO REMAIN BELOW ESTABLISHED LIMITS. THIS WOULD PROVIDE THE STATE FULL AUTHORITY TO APPLY CONTROLS AS IT SEES FIT. HOWEVER, IN ORDER TO ENSURE THAT PUBLIC HEALTH AND WELFARE ARE NOT VIOLATED, NO SOURCE WOULD BE PERMITTED TO EMIT AT LEVELS THAT WOULD VIOLATE THE AIR QUALITY STANDARD. THUS, IT WOULD BE ANOTHER LAYER OF REGULATIONS OVER THOSE NOW IN EXISTENCE. MOREOVER, IF A STATE ALLOWED A SOURCE LOCATED NEAR A STATE BORDER TO EMIT POLLUTANTS AT HIGH LEVELS, INTERSTATE POLLUTION AND, CONSEQUENTLY, INTERSTATE DISPUTES MAY RESULT.

--SHOULD EMISSIONS TAXES BE INSTITUTED? SUCH AN APPROACH WOULD PERMIT A SOURCE TO EMIT POLLUTANTS INTO THE ATMOSPHERE, BUT IT WOULD PAY A TAX TO DO SO. AT SOME POINT, IT WOULD BE MORE ECONOMICAL FOR THE OPERATORS TO INSTALL CONTROL EQUIPMENT. THE ADVANTAGE OF THIS APPROACH WOULD BE THAT THE SOURCE WOULD MAKE THE DECISION BASED ON COST CONSIDERATIONS AND WOULD CHOOSE THE MOST ECONOMICAL

METHOD OF REDUCING ITS TAX. SOME ENVIRONMENTALISTS MAY OBJECT THAT SUCH AN APPROACH WOULD GIVE SOURCES A "LICENSE TO POLLUTE." IF THE TAX IS NOT SET HIGH ENOUGH, THE RESULT COULD BE AN INCREASE IN EMISSIONS AND AMBIENT STANDARDS VIOLATIONS RATHER THAN A DECREASE IN EMISSIONS. ALSO, AS WITH NATIONAL EMISSION STANDARDS, SOURCES IN ISOLATED AREAS THAT WERE PERCEIVED AS HAVING NO EFFECT ON PUBLIC HEALTH AND WELFARE WOULD BE TAXED. SOME MAY BELIEVE THIS TO BE INEQUITABLE.

THIS CONCLUDES MY STATEMENT, MR. CHAIRMAN--WE WOULD BE HAPPY TO ANSWER YOUR QUESTIONS.

# EMISSIONS OF SULFUR OXIDES FROM POINT SOURCES IN CALENDAR YEAR 1977



KEY: (TONS)

- LESS THAN 500,000
- ⊘ 500,000 TO 1 MILLION
- ⊕ 1 MILLION TO 1.5 MILLION
- ▨ 1.5 MILLION TO 2 MILLION
- OVER 2 MILLION

SOURCES: "1977 NATIONAL EMISSIONS REPORT"  
(EPA-450/4-800-005, MAR. 1980)



SUMMARY OF SECTION 126 PETITIONS

A. West Virginia Section 126  
Petition - Regarding the Sammis  
Power Plant in Ohio

Source: Sammis Power Plant of Ohio Edison Power Company

Location of Source: Stratton, Ohio (On the Ohio River immediately adjacent to West Virginia)

Pollutants: Total Suspended Particulates  
Sulfur Dioxide

Impacted Area: West Virginia counties: Hancock, Brooke, Ohio, and Marshall

Statement of Case: The part of West Virginia allegedly impacted by the Sammis plant was violating the total suspended particulates and sulfur dioxide National Ambient Air Quality Standards (NAAQS). West Virginia alleges that the Sammis plant emits air pollutants which prevent attainment and maintenance of these standards in West Virginia.

Key Dates:

December 1977: West Virginia filed its Section 126 petition.

August, 1978: EPA took enforcement action against the operators of the Sammis plant, claiming violations of particulate emission limits.

September, 1978: West Virginia withdrew the particulate portion of its petition in response to EPA's enforcement action. The sulfur dioxide portion remained outstanding.

Current Status: The sulfur dioxide portion of West Virginia's Section 126 petition is still outstanding. No public hearing has been held. The operators of Sammis have agreed to add particulate control equipment to the plant.

B. Jefferson County, Kentucky,  
Section 126 Petition - Regarding  
The Gallagher Station Plant

Source: Public Service of Indiana Gallagher Station Plant

Location: New Albany, Floyd County, Indiana, on the Ohio River, directly across from downtown Louisville, Jefferson County, Kentucky

Impacted Area: Jefferson County, Kentucky

Pollutant: Sulfur Dioxide

Statement of Case: Air quality modeling performed by EPA Region IV indicated that sulfur dioxide emissions from the Gallagher Plant will interfere with the attainment and maintenance of the sulfur dioxide ambient air standard in Jefferson County, Kentucky. Gallagher was allowed to emit 6 pounds of sulfur dioxide per million BTU whereas the sources in Jefferson County could emit only 1.2 pounds. Because the Jefferson County Air Pollution Control District received no assurance from Indiana that it would incorporate remedies in its State plan, Jefferson County filed a Section 126 petition with EPA.

Key Dates:

May, 1973: EPA approved Indiana's sulfur dioxide State plan. The State plan limits Gallagher's sulfur dioxide emissions to 1.2 pounds per million BTU.

August, 1976: EPA approved revised Indiana regulations with no emission limits imposed on Gallagher.

May, 1979: Jefferson County filed its Section 126 petition.

July, 1979: Indiana submitted a revised statewide sulfur dioxide strategy that would allow Gallagher to emit 6 pounds per million BTU. (EPA has not approved this plan.)

April, 1980: EPA held a public hearing on Jefferson County's petition.

September, 1980: End of public comment period on the petition.

Current Status: No decision has been issued by EPA on this petition.

C. Commonwealth of Kentucky  
Section 126 Petition - Regarding  
The Clifty Creek Power Plant

Source: Clifty Creek Power Plant operated by the Indiana-Kentucky Electric Power Company

Location: On the Ohio River near Madison, Jefferson County, Indiana

Impacted Area: Portions of Indiana and Kentucky surrounding the plant site

Pollutant: Sulfur dioxide

Statement of Case: The plant is burning high sulfur coal and emitting 6.54 pounds of sulfur dioxide per million BTU. Kentucky's modeling of the plant's emissions predicts violations of the secondary sulfur dioxide ambient air standards in Indiana and Kentucky. Kentucky requested that EPA intervene and implement measures to reduce sulfur dioxide emissions because it believes that excessive emissions from the plant limits future industrial growth in that area of Kentucky. Specifically, it is preventing the construction of a new coal-fired power plant in Trimble County, Kentucky.

The Clifty Creek plant was not in compliance with the 1972 federally approved Indiana State plan. Various court decisions from 1975 to 1979 stated that the Indiana State plan was unenforceable due to procedural defects; EPA decided not to enforce the State plan, waiting for a final decision in this case and for Indiana to develop a revised State plan. Thus, the plant continued to emit sulfur dioxide at levels much higher than the 1972 State plan limit of 1.2 pounds per million BTU.

Key Dates:

May, 1978: Kentucky notified Indiana and EPA Region V of its concern about the plant and proposed to file petition.

December, 1978: Kentucky filed its Section 126 petition.

May, 1979: EPA solicited public comments on the petition.

June, 1979: EPA held a public hearing on the petition.

December, 1979: EPA closed public hearing record.

Current Status: EPA is reviewing the material presented. A decision has not been issued on this petition.



D. State of New Jersey Section 126  
Petition - Regarding Test Burns  
by Consolidated Edison

Sources: - Arthur Kill Generating Station  
- Ravenswood Generating Station  
Operated by the Consolidated Edison Company of  
New York

Location: Arthur Kill is located on Staten Island, New York.  
Ravenswood is located in Queens, New York.

Pollutants: Sulfur Dioxide  
Total Suspended Particulates

Impacted Area: Parts of New Jersey

Statement of Case: A proposed relaxation (the proposal was later finalized) of New York's State plan would permit the two sources to use fuel oil with a maximum sulfur content of 1.5 percent. This revision will be enforced for one year. New Jersey contends the State plan relaxation violates 110 (a)(2)(E) because it consumes 46 percent of the 24 hour prevention of significant deterioration increment for sulfur dioxide in portions of New Jersey and exacerbates the particulate emissions problem in an area that is nonattainment for the secondary ambient air standards. New Jersey also contends that the relaxation demonstrates EPA's failure to consider a regional approach to air quality programs.

New Jersey has rejected requests by New Jersey utilities to burn higher sulfur oil. They would prefer to see an equitable regional strategy developed before any sulfur-in-fuel changes are approved. New Jersey also believes New York's air quality analysis, that attempted to justify the State plan relaxation, was inadequate. New Jersey and Connecticut also filed a Petition for Review with the U.S. Court of Appeals for the Second Circuit regarding EPA's final rule allowing the test burn by Consolidated Edison.

Key Dates

January, 1980: EPA issued proposed rule to approve State plan relaxations permitting test burn.

April, 1980: EPA extended public comment period on proposed rules.

April, 1980: New Jersey filed Section 126 petition.

August, 1980: EPA issued final rule approving the State plan relaxation and allowing the Consolidated Edison test burn.

September, 1980: New Jersey and Connecticut (see description of the next Section 126 petition) brought suit against EPA in the U.S. Court of Appeals, Second Circuit, for issuing final approval of the State plan relaxation without holding a public hearing on their Section 126 petitions.

December, 1980: EPA held a hearing in response to the Section 126 petitions filed by New Jersey and Connecticut.

Current Status: EPA is preparing its decision on this Section 126 petition. The New Jersey-Connecticut lawsuit against EPA has not been decided by the Second Circuit of the U.S. Court of Appeals.

E Connecticut Section 126  
Petition - Regarding Test  
Burns by Consolidated  
Edison

(Note: This petition is similar to the New Jersey petition described previously. Like New Jersey, Connecticut complained about the proposed relaxation of New York's State plan to allow test burns at the Arthur Kill and Ravenswood power plants.)

Source: -Arthur Kill Generating Station  
-Ravenswood Generating Station  
Operated by the Consolidated Edison Company of New York

Location: Arthur Kill is located on Staten Island, New York  
Ravenswood is located in Queens, New York

Pollutant: Sulfur Dioxide  
Total Suspended Particulates

Impacted Area: Part of Connecticut for sulfur dioxide  
and all of the State for total suspended particulates.

Statement of Case: A proposed relaxation of the New York SIP would have permitted the two sources to use fuel oil with a 1.5 percent maximum sulfur content for a one year

test burn. Connecticut contends that the State plan revision violates 110(a)(2)(E) because it consumes 21 percent of the 24-hour prevention of significant deterioration sulfur dioxide increment in portions of Connecticut. Connecticut also contends that it would exacerbate the State's existing violations of the particulate ambient air standard.

Connecticut was concerned with the aggregate impact of sources, and the impact on Connecticut's secondary 24-hour sulfur dioxide standard. Also, Connecticut was studying the feasibility of coal conversions that would consume a portion of the remaining air quality reserves. Connecticut officials claim these reserves were gained by requiring Connecticut industries and residents to burn 0.5 percent sulfur fuel, and they resent New York utilities using up some of these reserves.

#### Key Dates

- January, 1980: EPA issued proposed rule to approve State plan relaxation permitting test burn.
- April, 1980: EPA extended public comment period on proposed rule.
- May, 1980: Connecticut filed Section 126 petition.
- August, 1980: EPA issued final rule allowing the Consolidated Edison test burn.
- September, 1980: Connecticut and New Jersey (see description of previous Section 126 petition) brought suit against EPA in the U.S. Court of Appeals, Second Circuit, for issuing final approval of the SIP relaxation without holding a public hearing on their Section 126 petitions.
- December, 1980: EPA held a public hearing on the Section 126 petition filed by New Jersey and Connecticut.
- Current Status: EPA is preparing its decision on the Section 126 petition. The Connecticut-New Jersey lawsuit against EPA has not been decided by the Second Circuit of the U.S. Court of Appeals.

F. Connecticut Section 126  
Petition - Regarding Test  
Burns by Long Island  
Lighting Company

Source: -Northport Generating Facility  
-Port Jefferson Generating Facility  
Operated by the Long Island Lighting Company  
(LILCO)

Location: Suffolk County, New York

Pollutants: Total Suspended Particulates  
Sulfur Dioxide

Impacted Area: All of the State and especially Greenwich  
Connecticut for total suspended particulates

Statement of Case: New York was proposing a State plan relaxation to permit LILCO to burn fuel oil with a maximum 2.8 percent sulfur content. Connecticut contends that this will exacerbate existing violations of ambient air standards for particulates and will interfere with attainment and maintenance of Connecticut's secondary 24-hour sulfur dioxide standard. Moreover, Connecticut claims EPA is giving inadequate consideration to the aggregate impact of sources. Increased emissions from LILCO make it more difficult for Connecticut to attain and maintain ambient air quality standards.

EPA reviewed the technical material submitted by New York State and concurred with the State's determination that no ambient air standard violations would occur; Connecticut, in turn, questioned the competency of the air quality data and modeling.

Key Dates:

July, 1976: EPA approved a special limitation to New York's State plan allowing the use of high sulfur content fuel oil at the LILCO plants.

August, 1977: EPA renewed the special limitation until May 1980.

May, 1980: The special limitation expired.

July, 1980: EPA proposed rule to approve New York's State plan relaxation to permit the burning of 2.8 percent sulfur fuel oil.

August, 1980: Connecticut filed Section 126 petition.

December, 1980: EPA held a public hearing in response to this and other Section 126 petitions.

Current Status: EPA is preparing a report and decision on the petition.

G. Pennsylvania Section 126  
Petition Regarding Various  
Sources in Ohio and  
West Virginia

SOURCES:

<u>Ohio</u>	<u>Affecting Ambient Sulfur Dioxide</u>	<u>Affecting Ambient Particulate Matter</u>
Federal Paperboard	x	x
Ohio Power Company	x	x
-Cardinal Plant		x
-Gavin Plant		x
-Muskingum River Plant		x
Ohio Edison Co.	x	x
-Sammis Plant	x	x
-Burger Plant	x	x
-Niles Plant		x
-Toronto Plant	x	x
Ohio Valley Electric Coop.		x
-Kyger Creek Plant		x
Columbus & Southern Ohio Edison Co.		x
-Conesville Plant		x
Toronto Paperboard	x	x
National Steel Corp., Weirton Division	x	x
Wheeling-Pittsburgh Steel Corp.		x
-North Plant	x	x
-South Plant	x	x
-Yorkville Plant	x	x
-Martins Ferry	x	x

West Virginia		Affecting Ambient Sulfur Dioxide	Affecting Ambient Particulate Matter
Allied Chemical Corp.	-Coal Fired boilers #1-4	x	x
	-North Plant	x	x
Banner Fiberboard		x	x
City Service Co.	-Reactors #1-4	x	x
Dieckmann and Sons	-boilers	x	x
Globe Refractory	-kilns	x	x
Koppers Company	-boilers	x	x
Mobay Chemicals	-boilers	x	x
Ohio Valley Medical Center	-boilers	x	x
Taylor Smith & Taylor	-boilers	x	x
Triangle Conduit	-boilers	x	x
U.S. Stamping	-boilers	x	x
Valley Camp Coal	-coal dryers	x	x
National Steel Corp.	-Brown Island coal battery	x	x
Mainland Coke	-coke batteries	x	x
National Steel Corp.	-wind box	x	x
Wheeling-Pittsburgh Steel	-Benwood Plant	x	x
	-Fallensbee Plant	x	x
National Steel Corp.	-Weirton Division	x	x
Ohio Power Co.	-Mitchell Plant	x	x
	-Kammer Plant	x	x
Monongahela Power Co.	-Harrison Plant		x

Location of Sources: Various locations in Ohio and West Virginia

Pollutants: Total Suspended Particulates  
Sulfur Dioxide

Impacted Area: State of Pennsylvania

Statement of Case: Pennsylvania claims that major sources in upwind states emit sulfur dioxide and particulate matter that exacerbates Pennsylvania's air pollution problem and causes an adverse economic impact by requiring Pennsylvania to adopt stricter emission limitations for its industries.

Pennsylvania also claims that EPA has permitted major sources to avoid emission controls by the use of taller stacks and ambient modeling which does not consider long distance transport and the impact on downwind states.

Key Dates:

December, 1980: Pennsylvania filed its Section 126 petition.  
 June 18-19, 1981: EPA held a public hearing in response to this petition.

Current Status: No action taken on the petition.

H. New York Section 126 Petition-  
 Regarding Four Ohio Power Plants

Sources: - Beckjord Plant owned by Cincinnati Gas and Electric  
 - Muskingum Plant owned by the Ohio Power Company  
 - Poston Plant owned by Columbus and Southern Ohio  
 - Cardinal Plant, owned by the American Electric Power Company

Impacted Area: State of New York

Pollutant: Sulfur dioxide

Statement of Case: Ohio has proposed to revise its State Implementation Plan to relax the sulfur dioxide emission limits for four coal-burning power plants. New York contends that derivatives of sulfur dioxide emitted in the midwest already pollute New York air and contribute to acid rain, and that Ohio's SIP relaxation would aggravate these problems. New York further states that Ohio's proposal, or if EPA considers the proposal, it must evaluate the proposal along with all pending mid-western sulfur dioxide emission limit relaxations to analyze potential cumulative impacts on New York.

Key Dates:

February 25, 1980: EPA proposed to approve higher emission limits for Cardinal and Poston, and to disapprove higher limits for Muskingum and Beckjord. (EPA later advised New York it intended to propose approval for higher limits at Beckjord.)

NOTE: This information is contained in the petition document, but was not verified by GAO.

January 16, 1981: New York filed its Section 126 petition.  
June 18-19, 1981: EPA held a public hearing on New York's  
Section 126 petitions.