United States
Environmental Protection
Agency Region I

Air Management Division
J.F. Kennedy Federal Building
Boston, MA 02203

EPA

AIR MANAGEMENT DIVISION: 1982 ANNUAL REPORT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

December 15, 1982

To: All Interested Parties

This is the first Annual Report of Region I's recently created Air Management Division. The report provides a wide variety of environmental and programmatic information on EPA and State air, pesticides, and toxics programs in New England.

Although this report does provide some information on ambient air quality, it should not be confused with the *Annual Report on Air Quality in New England*, published by EPA's Environmental Services Division, which is devoted solely to a detailed presentation of ambient air data. The Air Management Division *Annual Report* is an overview which provides key information on the Division's accomplishments and environmental results.

While this report is intended primarily for use by EPA and State program managers, the information may also prove useful to anyone interested in learning more about these complex environmental programs. Any suggestions on how future reports can be improved would be greatly appreciated.

Sincerely,

Harley F. Laing, Director
Air Management Division

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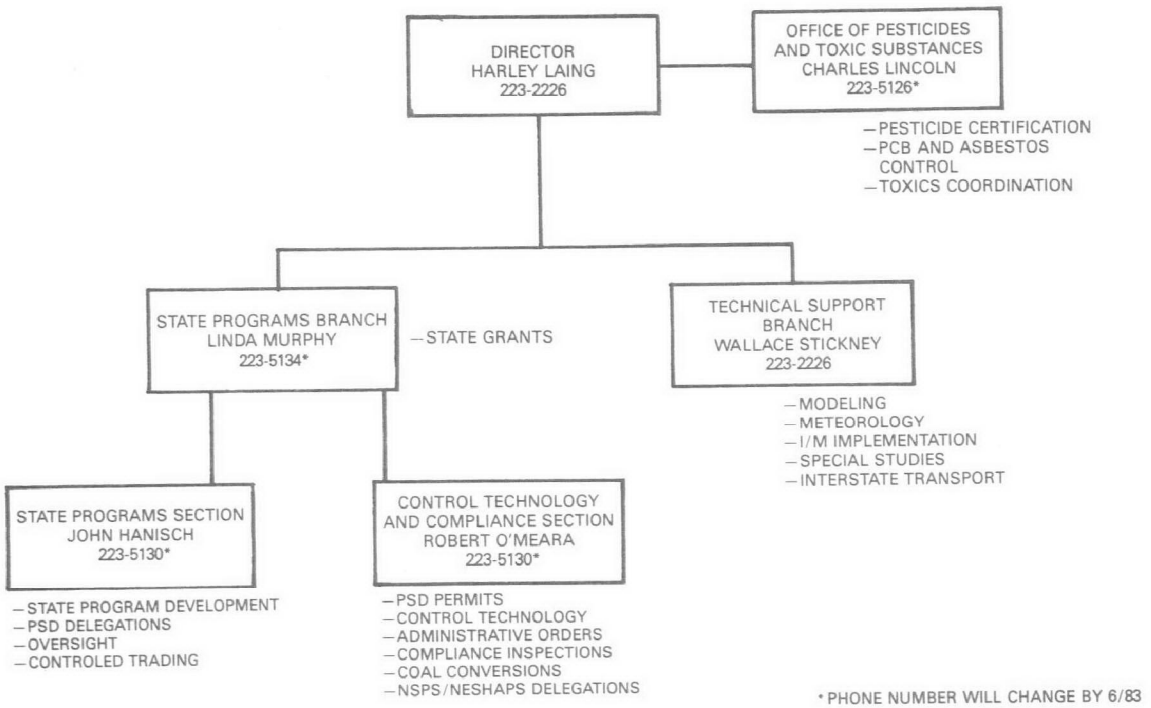
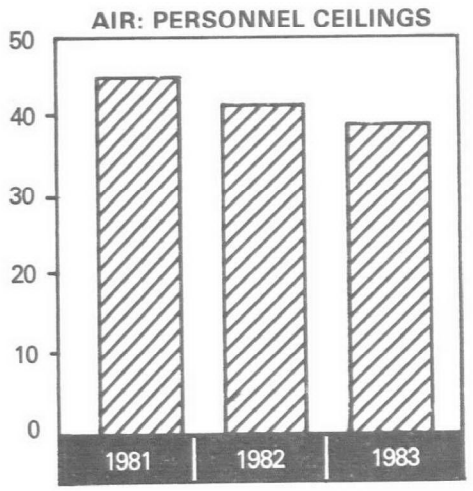
ORGANIZATION

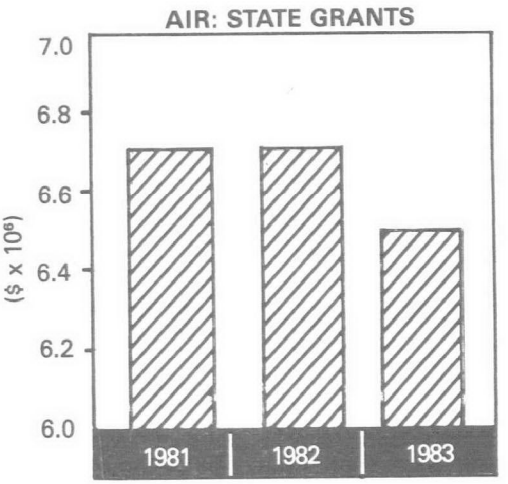


* PHONE NUMBER WILL CHANGE BY 6/83

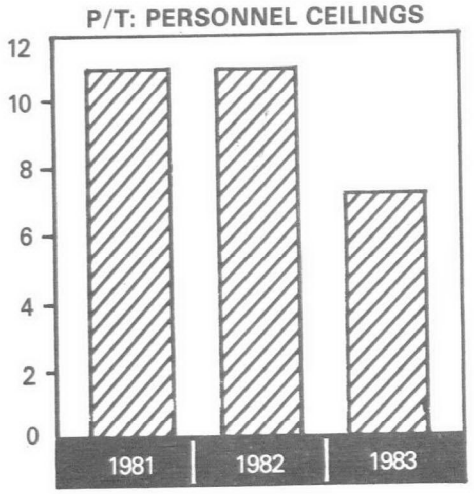
RESOURCES

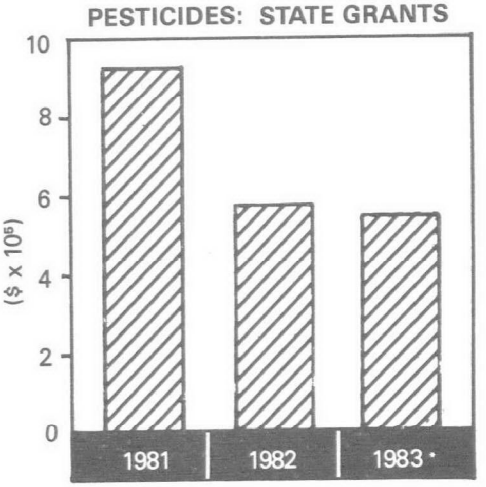
Air Program





Pesticides/Toxics Program





ENVIRONMENTAL RESULTS

The main objective of the air program is the attainment of the National Ambient Air Quality Standards which are mandatory goals for areas with violations of those standards (non-attainment areas). They are designed to protect both public health (primary standards) and welfare (secondary standards).

National Ambient Air Quality Standards

National Air Quality Standards

Pollutant	Averaging Time	Primary Standard	Standard Secondary
Sulfur Dioxide	Annual	80 ug/m³	—
	24 Hours	365 ug/m³	—
	3 Hours	—	1300 ug/m³
Total Suspended Particulates	Annual	75 ug/m³	60 ug/m³
	24 Hours	260 ug/m³	150 ug/m³
Carbon Monoxide	8 Hours	10 mg/m³	same
	1 Hour	40 mg/m³	same
Ozone	1 Hour	235 mg/m³	same
Nitrogen Dioxide	Annual	100 ug/m³	same
Lead	Quarterly	1.5 ug/m²	same

Ambient Monitoring

To monitor air quality in relation to these standards, New England states maintain a network of over 200 air monitors. Additional monitors are also used in conjunction with specific industrial sites. These monitors are situated and operated to conform with EPA requirements. States regularly submit information from this system to EPA's computerized data base of ambient air information.

Air Monitors in New England (a

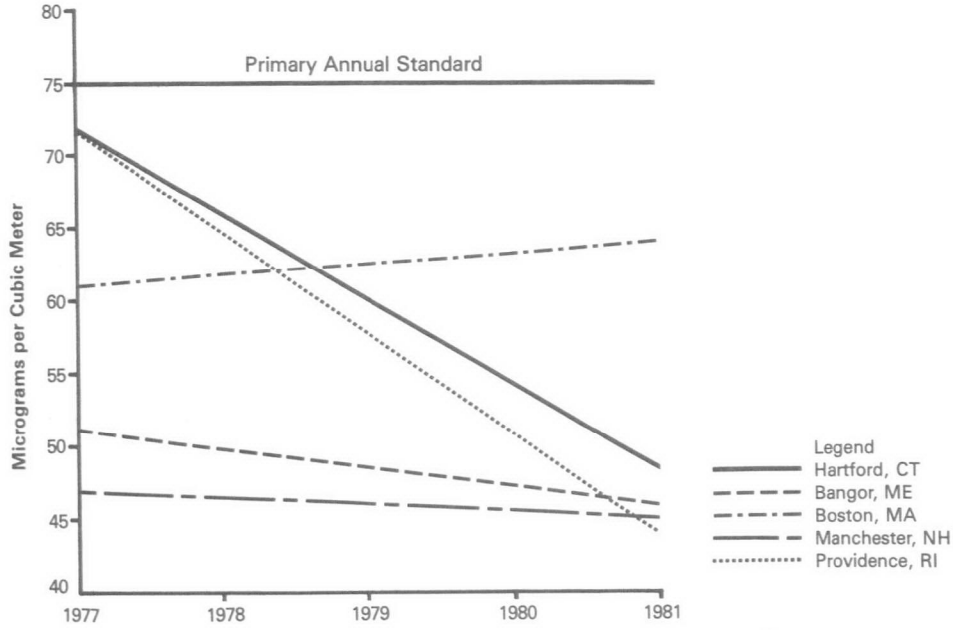
State	Monitors Required	Monitors Operating	Not Meeting EPA Standards (b
CT	71	55	3
MA	75	69	10 (c
ME	18	17	2
NH	27	26	4
RI	24	24	1
VT	12	12	1
Total	227	203	21

a) as of 10/1/82
b) operating monitors not meeting EPA's data submittal requirements
c) Mass. data submittal standards are stricter than EPA's which causes more data to be rejected

The following graphs, based on data from this network, show five year trends in selected urban New England areas. These cities were chosen on the basis that they were representative of existing conditions and that sufficient data was available. Seasonally adjusted trend lines are shown for TSP, SO_2, CO, and O_3. These trend lines are based on a statistical program that produces monthly means for each site, performs a linear regression, and tests for significant trends. They provide an overview of major changes; more detailed data is published in the *1981 Annual Report on Air Quality in New England*. Data on 1982 air quality will be available in the fall of 1983.

TSP Trends

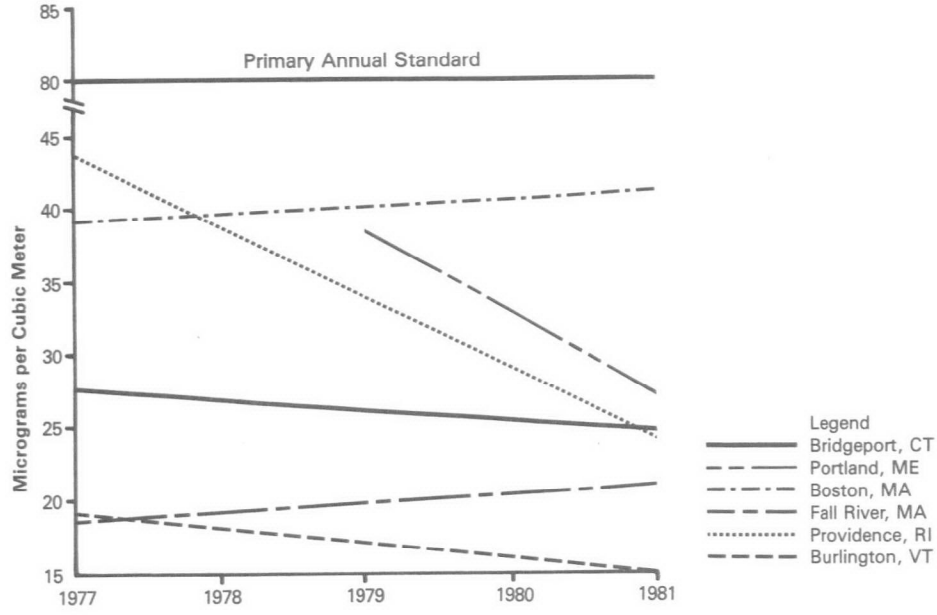
FIVE YEAR TREND
TOTAL SUSPENDED PARTICULATES



TSP levels have shown significant improvement in four of the five cities shown. The analysis of Boston's data shows no statistically significant trend for the past five years.

SO_2 Trends

FIVE YEAR TREND
SULFUR DIOXIDE

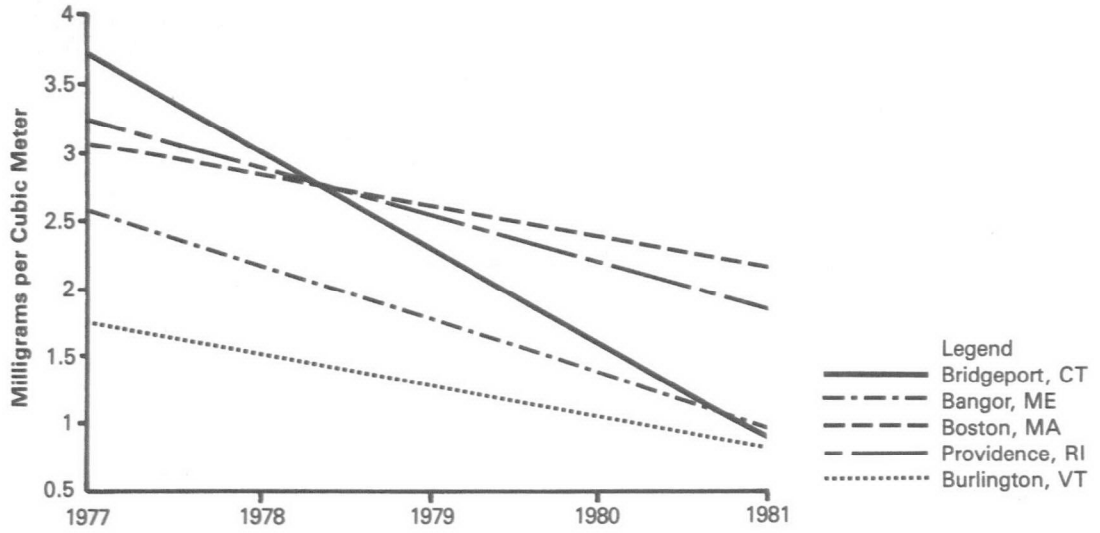


The data shows no general trend in SO_2 levels throughout New England. Three cities show decreases. Levels in Fall River, Mass., have been increasing. The analysis of Boston's data shows no statistically significant trend for the past five years.

ENVIRONMENTAL RESULTS

CO Trends

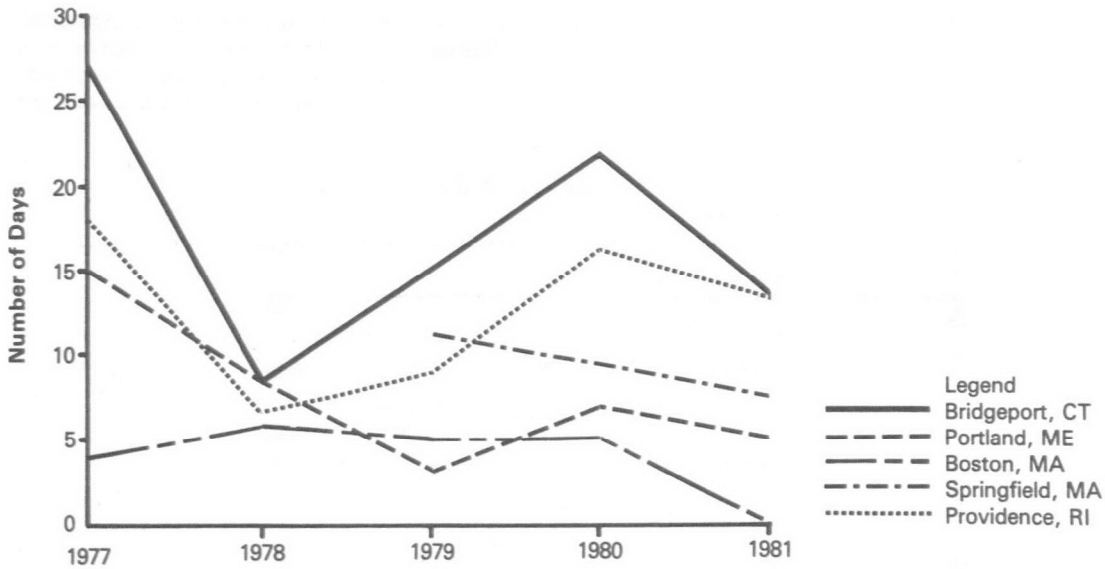
FIVE YEAR TREND—CARBON MONOXIDE



All of the cities analyzed showed a significantly decreasing trend in CO levels. This has held true throughout the region. No site in New England showed increasing CO levels. Note that while this graph shows annual averages, the CO standards are set for 8 and 1 hour averaging times.

O_3 Trends

FIVE YEAR TREND—OZONE



Because Ozone depends more on meteorology than any other pollutant, no clear trend is discernable in this graph of the number of days standards have been violated. For all cities, there were fewer days showing violations in 1981 than in 1977.

States also maintain inventories of emission sources for the National Emissions Data System (NEDS). As with ambient data, emissions data is compiled nationally by EPA. Both states and EPA can use this information to plan strategies focusing on major emitters and to judge their effectiveness in controlling emissions. The following table shows the status of state inventory systems.

Emissions Inventory

State Emission Inventories

State	Estimated No. Of Entries	Description
CT	10,800	Automated; includes all points emitting more than 3 tons/year.
ME	625	Automated; includes all plants over 10 MMBTU
MA	8,000	Automated; includes all plants over 3 MMBTU
NH	480	Partially automated; includes all points emitting more than 10 tons/year
RI	600	Manual; includes all plants emitting more than 100 pounds/day or 10 pounds/hour
VT	190	Automated; includes all plants emitting over 1 ton/year

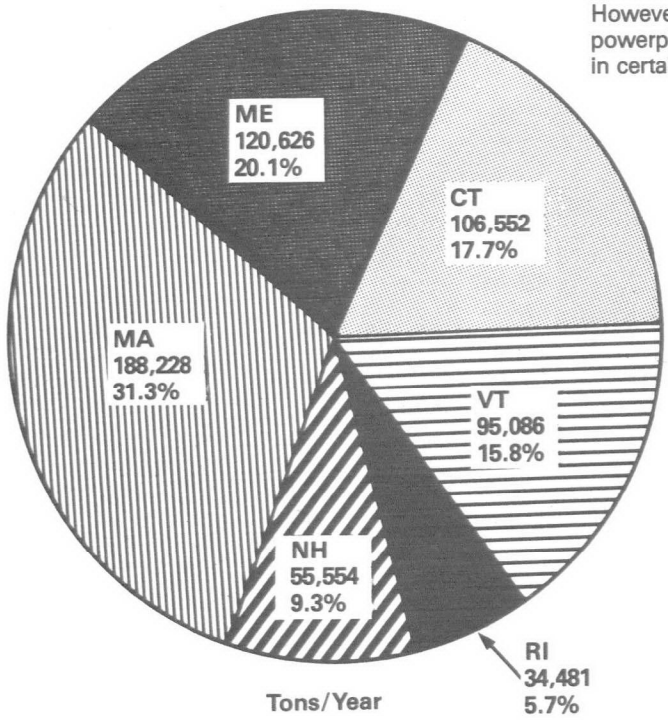
NEDS includes information on both point and area sources. Point sources are those large enough to require an individual permit. Area sources include both clusters of small emissions points (such as a housing development) and mobile sources. For both types, NEDS contains emission estimates based on standard emission factors rather than actual emission tests.

In the last year, EPA and the states updated the NEDS data base as a part of the Northeast Corridor Regional Modeling Project (NECRMP). Emissions information was collected for more than 5000 point sources throughout the region. The following pie charts, based on this information, show emissions estimates in 1980 for TSP, SO_2, and VOC.

TSP Emissions

Total Suspended Particulates

TSP emissions in New England totaled over 600,000 tons in 1980 according to the NEDS data base. By far the largest cause of these emissions were area sources such as construction sites and transportation. However, large point sources, such as powerplants, contribute a greater percentage in certain areas.

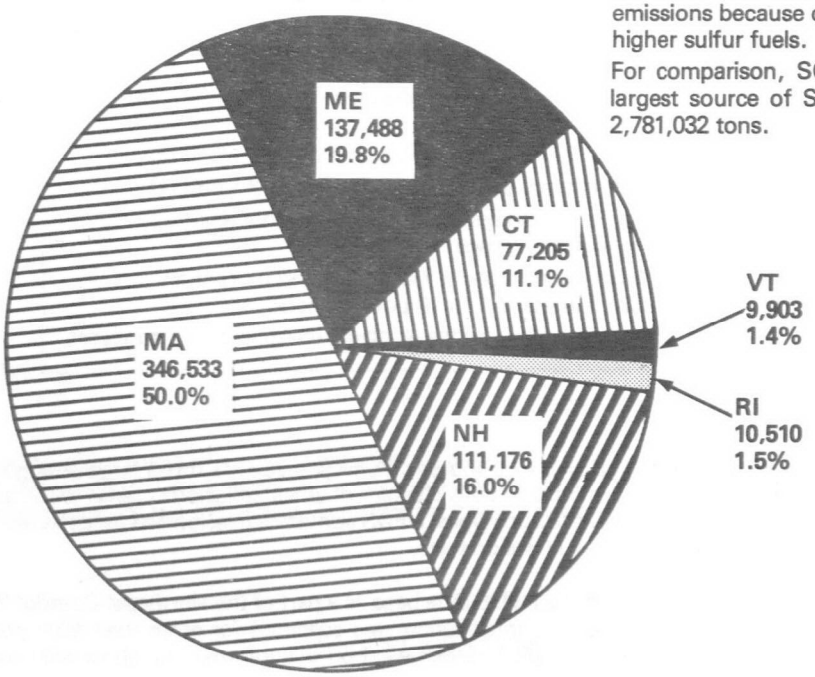


SO_2 Emissions

Sulfur Dioxide

New England SO_2 emissions totaled over 690,000 tons in 1980. Unlike TSP, point sources emit the largest amount of SO_2, especially in industrialized states. Most of these emissions result from sulfur in fuel used for industrial heating or generating electricity. These emission estimates may understate SO_2 emissions because of the recent trend towards higher sulfur fuels.

For comparison, SO_2 emissions in Ohio (the largest source of SO_2) were estimated to be 2,781,032 tons.

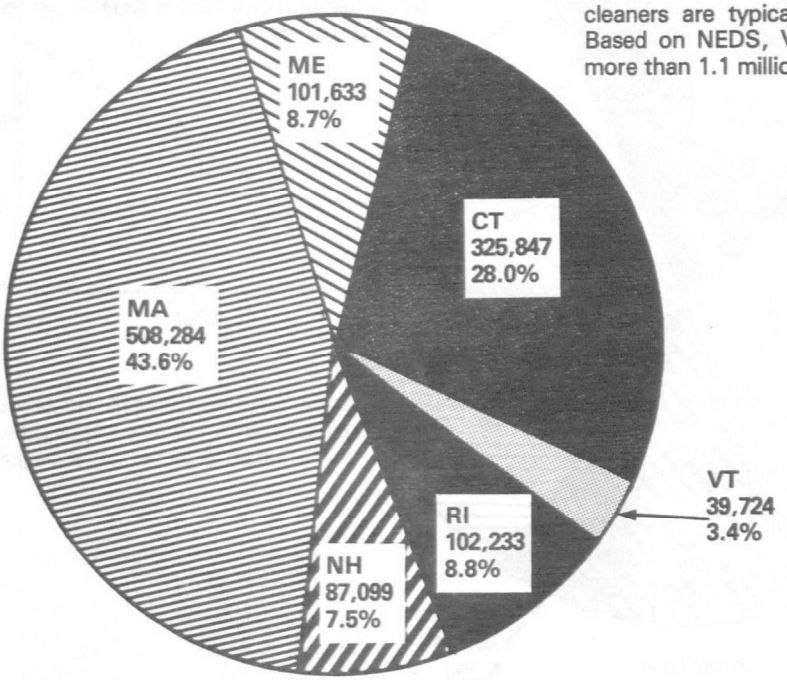


Tons/Year

VOC Emissions

Volatile Organic Compounds

While not a criteria pollutant, VOC's are regulated because they can form ozone. Most VOC's originate from exhaust gases from mobile sources, but point sources can contribute significant amounts as well. Chemical manufacturers, degreasers, and dry cleaners are typical types of VOC sources. Based on NEDS, VOC sources in N.E. emit more than 1.1 million tons.



Tons/Year

Violations Since 1981 in Attainment or Unclassified Areas

Recent Violations

State	Pollutant	Town(s)
Maine	Total Suspended Particulates (1°)	Jay, Madawaska, Presque Isle, Lincoln
	Total Suspended Particulates (2°)	Augusta, Fairfield, Lewiston, Waterville, Portland, S. Portland
	Sulfur Dioxide (1°)	Lincoln
	Ozone (1°)	Cape Elizabeth
Mass.	Total Suspended Particulates (2°)	Chicopee
N.H.	Total Suspended Particulates (2°)	Northumberland

1° = primary 2° = secondary

This table lists recent violations of primary and secondary standards in areas that were classified as attainment or were unclassified because of insufficient data. It gives a general overview of recent air quality problems.

When ambient violations are reported, EPA and the states evaluate the data to determine if the area of violation should be redesignated as non-attainment. Part of this evaluation is to determine the cause of the new violation which can vary from road dust to an improperly designed stack to the siting of a new monitor. Redesignation can then occur as a revision to the state's SIP.

Summary and Outlook

The primary goal of the air program is to maintain the ambient air quality standards for criteria pollutants. Trend lines show improvement in concentrations of those pollutants although problem areas do exist (see state summaries for listings of primary non-attainment areas). Emissions trend data is not now available, although future annual reports will track those trends as well. Because managing for environmental results requires good information about those results, improving the ambient air and emissions data bases will continue to be a high priority.

The future will see a greater emphasis placed on hazardous and other non-criteria pollutants (see special topics section), and an agressive search for innovative and efficient methods of achieving environmental results.

AIR PROGRAM ACTIVITIES

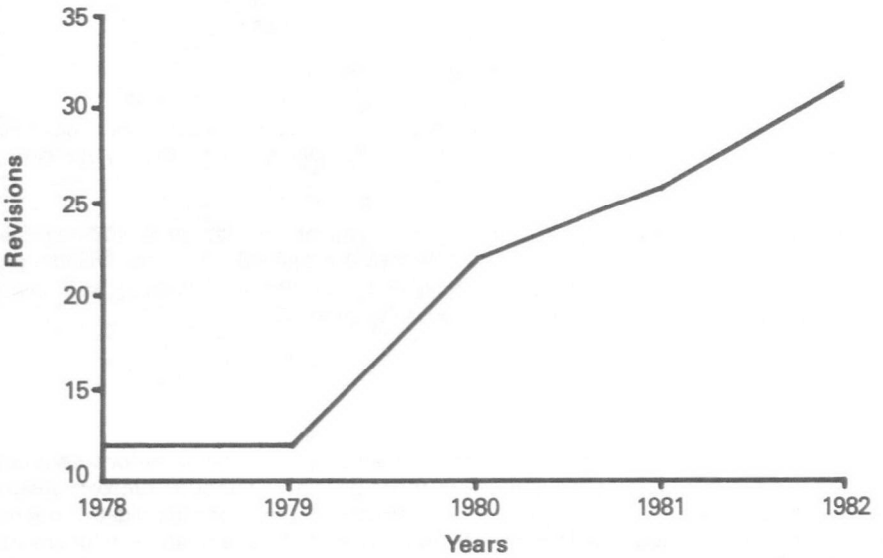
The Clean Air Act requires states to develop air quality control plans that will achieve and maintain the NAAQS. Elements of these plans include emission limits for large industries, new source review procedures, and transportation control measures. Approving revisions to these State Implementation Plans is one of the Air Division's main responsibilities.

SIP Revision Trend

States may submit revision requests for a variety of reasons. The most numerous type of SIP revisions have been the result of the higher cost of low sulfur fuel that drove many industries to seek relaxations of the sulfur in fuel standards. These sulfur relaxations permitted these industries to burn a lower cost, higher sulfur, oil. Other types of SIP revisions resulted from changes in Clean Air Act requirements and from ambient monitoring data that necessitated revised attainment designations.

SIP revisions must have supporting technical evidence showing that standards won't be violated. Proposed and final SIP revisions are published in the *Federal Register.*

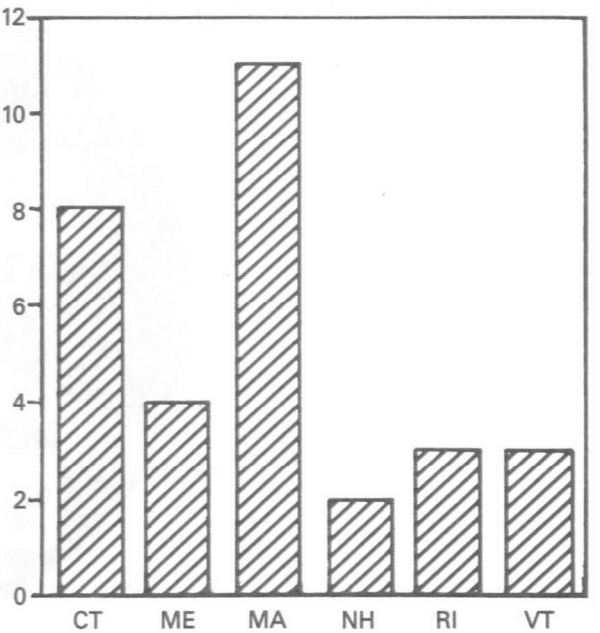
SIP REVISIONS PER YEAR



1982 SIP Revisions

In 1982, EPA approved 31 SIP revisions in New England. The Clean Air Act allows states until 1987 to comply with ozone and carbon monoxide standards, but only if they submit plans showing how this compliance will be attained. Many of the recent SIP revisions have been submitted to fulfill this requirement. These SIP regulations include adoption of Inspection and Maintainance procedures for mobile sources, controls on VOC sources, and transportation control measures.

SIP REVISIONS PER STATE (1982)

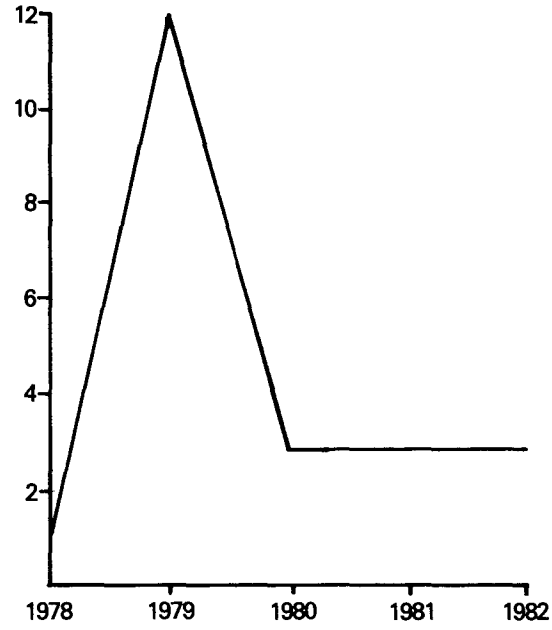


PSD Permits

The 1977 Clean Air Act amendments established the Prevention of Significant Deterioration permit program to limit the amount of additional pollution emitted in "clean" (attainment) areas. Any major new source or major modification to an existing source must apply for a PSD permit to EPA or an authorized state. The source must use the Best Available Control Technology and cannot consume more than a specified increment of pollution. PSD requirements apply only in attainment areas.

Both the decline in industrial activity and the recent transfer of PSD authority to the states (see page 15) has reduced the number of permits the Air Division is processing. Many of those which have been issued recently are energy related, including a number of resource recovery facilities.

EPA-ISSUED PSD PERMITS PER YEAR



Air Quality Modeling

Air quality models are sets of mathematical equations that are designed to predict emission impacts by calculating the interactions among emissions, weather, and geography. Modeling is required for a wide variety of air quality reviews to predict the impact of a proposed action and to assure that standards won't be violated. The Air Division reviews modeling results submitted by states or industries, does in-house modeling, and provides technical assistance to the states.

EPA's guidelines recommend using one of two levels of modeling. The first level consists of relatively simple "screening" models which tend to be conservative; that is they predict worst-case impacts. The second level consists of refined models which EPA recommends if the predicted impacts from the screening model exceed regulatory limits. Both types are done using a computer.

No. of 1982 Modeling Reviews

PSD Permits	6
Coal Conversions	5
Single Source SIP Revisions	13
Area Wide SIP Revisions	5
EIS's	7
Miscellaneous	7

Coal Conversions

Recent Coal Conversions

Plant	Capacity	Status
Mt. Tom Holyoke, MA	145 MW (1 unit)	converted 12/81; estimated TSP emission rate is .3 lb./MMBTU
Salem Harbor Salem, MA	310 MW (3 units)	converted 2/82; estimated TSP emission rate is .2 lb/MMBTU for units #1 and #3, and .35 lb./MMBTU for unit #2.
Somerset Somerset, MA	195 MW (2 units)	DCO proposed 10/82; coversion possible in early 1983

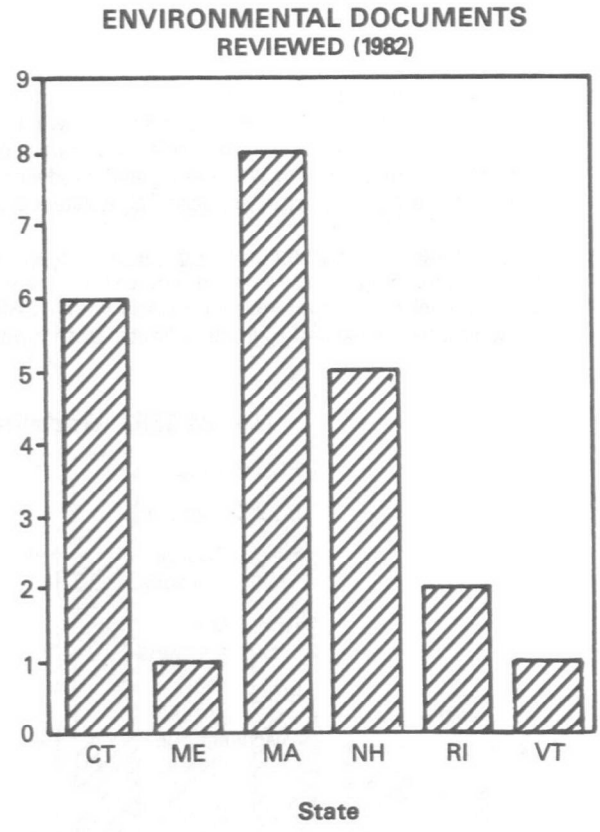
The swift rise in oil prices during the 1970's sparked renewed interest in converting electric powerplants from oil to coal (see Special Topics section). Although oil price changes have leveled off, the price differential between oil and coal remains large enough so that a number of utilities believe a conversion can be economic, and are applying to EPA for Delayed Compliance Orders (DCO's) or SIP revisions which may be needed for the conversion to go forward.

In 1982, the Air Division finalized 2 DCO's and began work on a third. Northest Utilities' Mt. Tom station and New England Electric Company's Salem Harbor station both began burining coal under the conditions of an EPA-issued DCO. Montaup Electric Company applied for a DCO for their Somerset Station, and if it is approved the station could burn coal in early 1983.

Environmental Review

Many federal agencies provide grants or issue permits for highway construction, housing developments, or other major federal projects. Reviewing the environmental analyses required by the National Environmental Policy Act (NEPA) for these projects is one way of ensuring that they conform to the conditions of a state's SIP. In 1982, the Air Division completed 23 reviews of environmental impact statements, environmental assessments, and findings of no significant impact (FONSI's). These reviews were coordinated with the relevant state and federal agencies to discuss and resolve any significant inconsistencies with the SIP.

This type of consistency review is required for each state, and helps EPA track the environmental results achieved by state programs. Most states have decided to use the NEPA process as their forum for evaluating the consistency of major federal actions. One state, Connecticut, issues an indirect source permit to meet this goal as well.



Compliance inspections are designed to oversee stationary source compliance with emission regulations. Both EPA and the states conduct periodic inspections to ensure that sources are meeting State Implementation Plan requirements (which are federally enforceable). As a result, 95% of the region's largest sources (class A1) are in compliance with state and federal regulations.

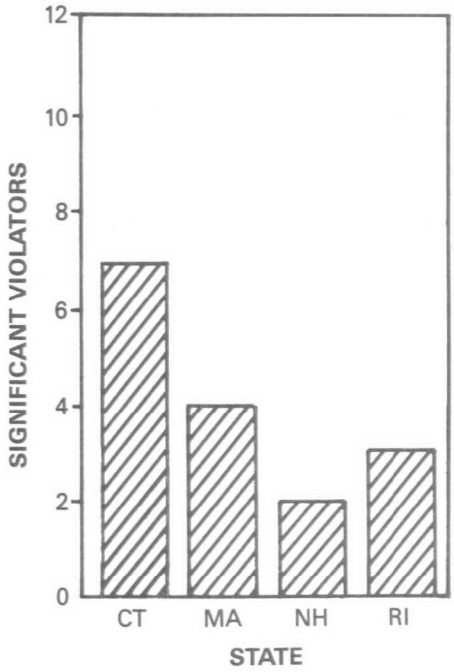
In 1982, EPA conducted 50 inspections, concentrating on major emission sources (see state summaries for state inspection information). These include class A1 and A2 sources, significant violators, and sources subject to New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants. These are distinguished as follows:

Class A1	Actually emits 100 tons/year of a critical pollutant or is an NSPS or NESHAPS source.
Class A2	Has the potential to emit 100 tons/year of a critical pollutant.
Significant Violator	A class A1 source which is violating emission standards in a non-attainment area or is violating NESHAPS standards.

EPA and state inspectors determine a source's compliance by evaluating process equipment, emission control equipment, and by visual inspection of stack emissions. This information, along with stack tests of emissions, are used to designate a source's compliance status. For non-complying sources, EPA and the state make a decision about the type of enforcement action needed to bring the source back in compliance. This can include a Notice of Violation, an Administrative Order, or court action.

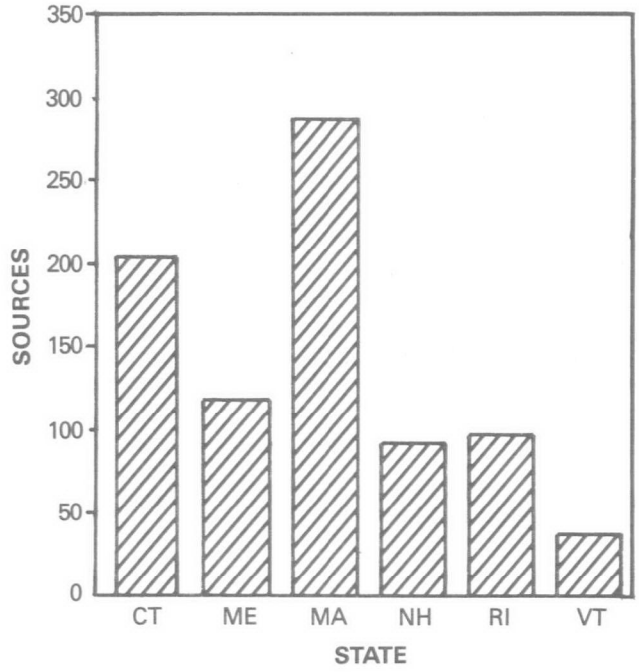
Information on major pollution sources is contained in the EPA Compliance Data System (CDS), a computerized data system which stores both emission and compliance information. CDS is used to set regional priorities and to evaluate compliance statistics in each state. EPA relies heavily on the states to maintain and update the CDS data base.

NUMBER OF SIGNIFICANT VIOLATORS, BY STATE (a



(a Maine and Vermont have no significant violators

NUMBER OF CLASS A1 SOURCES, BY STATE



AIR PROGRAM ACTIVITIES

Region I continued to work with New England States on innovative strategies to meet environmental requirements. As part of this effort, the Air Division approved two emission "bubbles" which allowed industries to meet their SIP emission limits by trading emission increases and decreases from different points at their facilities. Net emissions remain constant under these bubbles while operating costs have been reduced. The Air Division also gave two states general approval to issue their own bubbles to certain VOC sources.

Regulatory Reform

State	Description
Conn.	Uniroyal Chemical in Naugatuck was allowed to burn a combination of 1% sulfur fuel and natural gas equivalent in emissions to burning .5% sulfur fuel
Conn.	EPA gave state generic authority to grant bubbles to a variety of VOC sources providing there is no adverse impact on air quality.
Mass.	EPA gave the state authority to issue VOC bubbles to surface coating industries.
Vt.	Burlington Electric's Moran plant was allowed to burn 2% sulfur oil in one of its boilers when a low sulfur fuel (wood or gas) is burned in its other 2 boilers.

Not all situations will permit use of a bubble. Bubbles cannot be used to meet any new source review requirements that might apply to a major new source or industrial modification. For example, NSPS or NESHAPS limits cannot be avoided by bubbling. There are also limits on using bubbles in non-attainment areas. In many cases, however, bubbles will continue to be used as an efficient way of complying with environmental requirements.

Management Initiatives

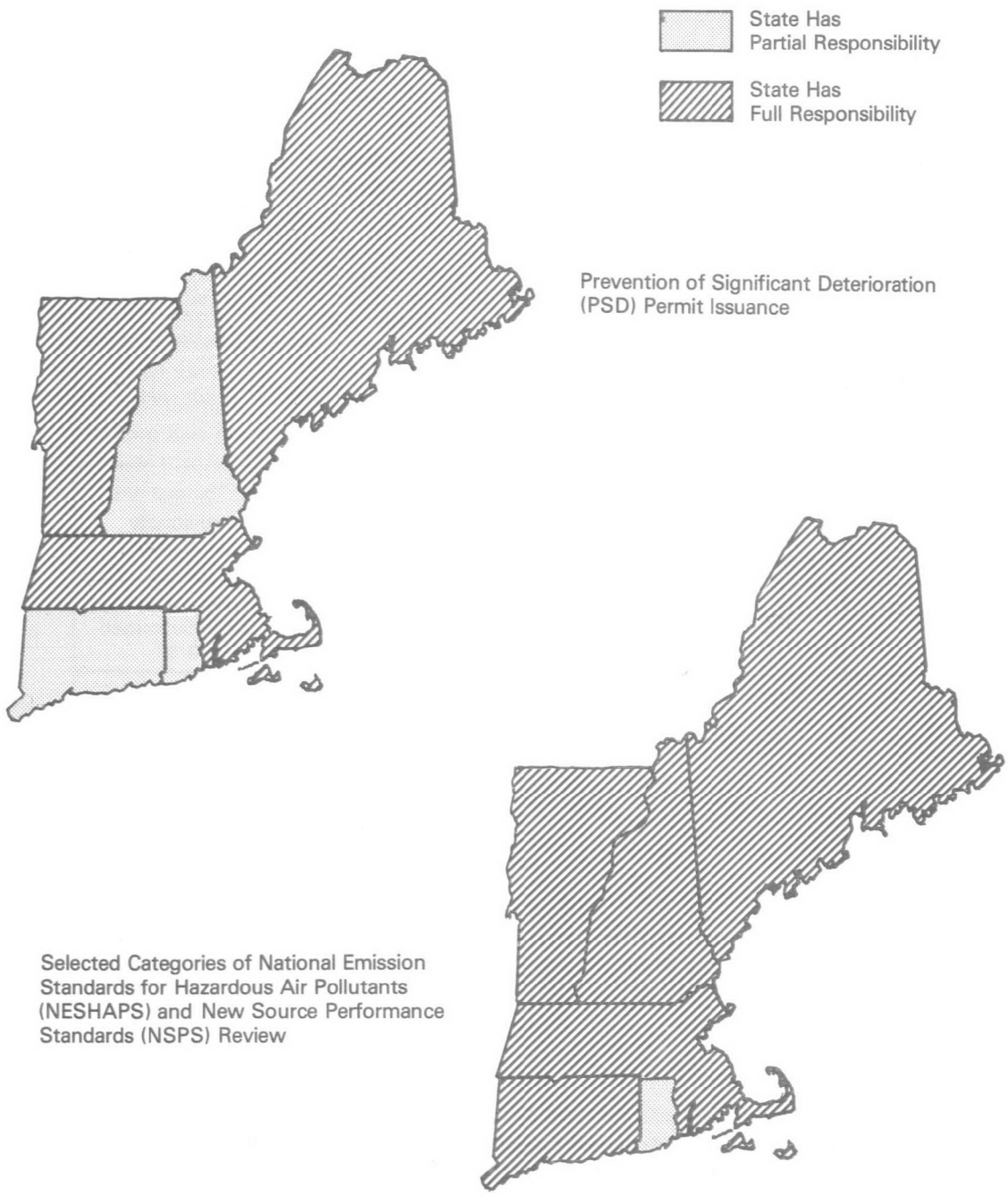
The Air Division is committed to improving the administration of its programs. The following recent initiatives are two examples.

Management Information System The Air Management Information System (AMIS) is an automated data base that provides managers with current information on the status of air program activities. In its initial stages, AMIS tracks the status of all SIP actions, provides summary status reports, and highlights overdue actions. For 1983, AMIS is being expanded to track the status of state grant outputs as well.

Parallel SIP Processing By jointly developing SIP revision submittals, EPA and the states can eliminate redundant reviews and reduce the time it takes to finalize SIP actions. This type of joint development of submittals requires states to expend more effort in SIP development than the traditional route. In return, problems that could delay final approval are identified and resolved sooner.

In 1982, the Air Division worked on 11 SIP revisions that were parallel processed for Connecticut, New Hampshire, and Rhode Island.

Air Programs Adopted By New England States



Status of PSD, NSPS and NESHAPS Delegations

One of the major changes occurring in the Air program is the shift of authority for issuing permits and orders from EPA to the states. This trend is likely to continue as EPA's role becomes one of audit, oversight, and technical support, and state environmental offices have primary day to day responsibility for making environmental decisions. In 1982, EPA delegated 55 source categories under NSPS and 97 source categories under the NESHAPS program. EPA also delegated PSD authority to 4 New England States.

The PSD permit program (see page 11) involves making applicability determinations, modeling air quality impacts, and requiring control technologies. NSPS and NESHAPS authority involves imposing national emission and performance standards on specific categories of sources for which standards have been published. For all delegated programs, EPA retains oversight and co-enforcement authority.

Status of Attainment Plans

In 1979, states were required to submit SIP revisions which demonstrated how they were planning to achieve attainment for all criteria pollutants by Jan. 1, 1983 (this applied only to states with non-attainment areas.) In addition, states could request extensions for O_3 and CO attainment until 1987, but only if they submitted additional SIP revisions in 1982 showing how this would be achieved (see page 10). The following matrix lists the status of EPA's approval of these attainment plans as of 11/1/82.

	Pollutant			
State	SO_2	TSP	CO	O_3
CT	NA	Fully approved for 1°; 2° not yet submitted	Extension requested '82 SIP not yet submitted	Extension requested '82 SIP not yet submitted
MA	NA	Fully approved for 1°; 2° not submitted	Extension requested '82 SIP submitted—9/82	Extension requested '82 SIP submitted—9/82
ME	Fully approved for 1° and 2°	Fully approved for 1° and 2°	'79 SIP fully approved	'79 SIP fully approved
NH	Fully approved for 1° and 2°	Fully approved for 1°; 2° not yet submitted	SIP submittals—Nashua—11/81 Manchester—6/82	'79 SIP conditionally approved
RI	NA	Fully approved 2° not yet submitted	'79 SIP fully approved	Extension requested '82 SIP submitted 10/82
VT	NA	Fully approved for 1° and 2°	'79 SIP fully approved	'79 SIP fully approved

NA = Not Applicable 1° = Primary 2° = Secondary

I/M

States requiring extensions past 1982 for attainment and maintenance of O_3 and CO standards were required to include motor vehicle inspection and maintainance (I/M) programs as an element in their 1979 SIP revisions. In New England, Connecticut, Massachusetts, and Rhode Island developed I/M programs as described below.

State	Description
CT	Will have centralized contractor operated program. Starting on 1/83, about 1.6 million vehicles will be inspected at one of 18 stations. Waivers will be available if repair costs exceed $70.
MA	Will have a decentralized garage based program using "tamper proof" emission analyzers. Starting on 4/83, about 4 million vehicles will be inspected. Waivers will be available if repair costs exceed $100 or 10% of the car's value.
RI	Has had a decentralized garage based program using off the shelf equipment since 1979.

State Overview: Connecticut

State Air Director:
Leonard Bruckman, Director
Air Compliance Unit/DEP
165 Capitol Ave., Hartford, CT 06115
(203) 566-4030

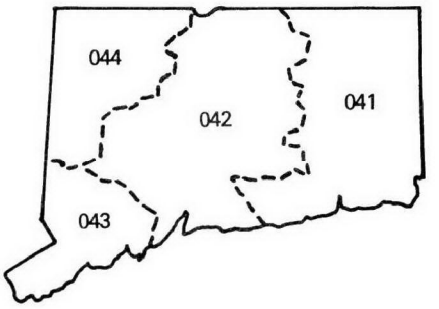
EPA State Coordinator:
Susan Hager
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 10,800 (a
No. of Permits Issued (FY'82): 981 (b
No. of Inspections (FY'82): 210 (c
No. of Class A1 Sources: 202 (c
No. of Plants with Emissions > 100 tons/yr.: 75 (d

(a estimated no. of emissions points in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS



041 - Eastern CT
042 - Hartford-New Haven-Springfield
043 - NJ-NY-CT
044 - Northwestern CT

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
CO	42	1980	All	1.768,302
	43	1981	All	804,862
O_3	41	1981	All	422,239
	42	1981	All	1,768,302
	43	1981	All	804,862
	44	1975	All	112,173

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

Construction Moratorium In response to a suit by the Connecticut Fund for the Environment, the Second Circuit Court of Appeals decided in February, 1981 that EPA could conditionally approve Connecticut's SIP but had to impose a moratorium on construction of major new VOC sources. This will remain in effect until the state adopts the required VOC controls (expected in 1983).

Sulfur Relaxations Connecticut recently allowed all but one source to go from .5% to 1% sulfur in oil (the exception was Northeast Utilities' Middletown station). Emissions are expected to increase from 73,000 to 120,000 tons. To monitor impacts, the state is proposing to increase the number of SO_2 monitoring sites from 8 to 17.

Interstate Impacts The state DEP has actively reviewed EPA's SIP actions in other states to evaluate their impact on Connecticut and to review them for consistency. One area of concern is recent TSP relaxations in the Midwest.

State Overview: Maine

State Air Director:
David Tudor
Bureau of Air Quality Control/DEM
State House Station 17, Augusta, ME 04333
(207) 289-2437

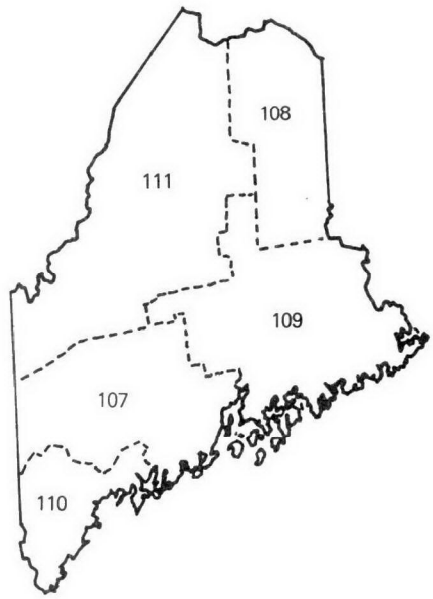
EPA State Coordinator:
Margaret McDonough
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 625 (a
No. of Permits Issued (FY'82): 93 (b
No. of Inspections (FY'82): 65 (c
No. of Class A1 Sources: 135 (c
No. of Plants with Emissions
> 100 tons/yr.: 132 (d

(a estimated no. of plants in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS



109 - Down East
110 - Met. Portland
111 - Northwest ME
107 - Androscoggin Valley
107 - Aroostook

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
TSP	109	1981	Lincoln*	5,066
CO	107	1979	Lewiston	40,481
	109	1978	Bangor	31,643
SO_2	109	1980	Millinocket	7,576
O_3	107	1978	All	383,360
	110	1981	All	387,778

*Non-attainment designation proposed

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

TSP Violations Lincoln, Madawaska, and Presque Isle, all had violations of the primary TSP standard in 1981. The Dept. of Environmental Protection is working with paper companies in Lincoln and Madawaska to solve the problem and has asked EPA to designate Lincoln as non-attainment. The Presque Isle problem has proved more difficult; the state is doing further study to determine its cause.

Acid Precipitation This is probably the single most controversial air problem in the state. As in other New England states, Maine receives, through long distant transport and from local sources, sulfates and other aerosols believed to contribute to acid precipitation. The state is currently gathering data through its monitoring program.

Ozone Attainment In November, 1981, Maine issued a permit to Pioneer Plastics requiring the company to install a VOC incinerator. This was the final step in controlling major VOC sources as required by the Clean Air Act.

State Overview: Massachusetts

State Air Director:
Kenneth Hagg, Director
Division of Air Quality Control/DEQE
One Winter St., Boston, MA 02108
(617) 292-5630

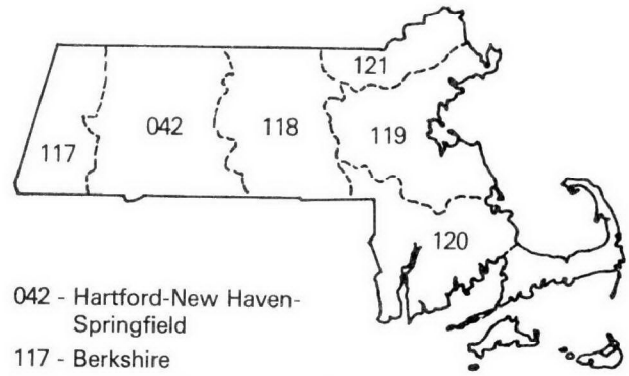
EPA State Coordinator:
Cynthia Greene
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 8000 (a
No. of Permits Issued (FY'82): 376 (b
No. of Inspections (FY'82): 300 (c
No. of Class A1 Sources: 281 (c
No. of Plants with Emissions > 100 tons/yr.: 160 (d

(a estimated no. of plants in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS



042 - Hartford-New Haven-Springfield
117 - Berkshire
118 - Central MA
119 - Met. Boston
120 - Met. Providence
121 - Merrimack Valley

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
TSP	118	1981	Worcester	161,799
CO	118	1978	Worcester	161,799
	121	1978	Lowell	92,418
	119	1981	Boston	562,994
	119	1978	Cambridge	95,322
	119	1980	Medford	58,076
	119	1977	Quincy	84,743
	119	1978	Waltham	58,200
O_3	All	1981	All	5,737,037

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

CO and O_3 Attainment Mass. adopted regulations to control 7 VOC source categories and also a VOC "bubble" for surface coaters (see page 14). These controls, combined with transportation control measures to reduce carbon monoxide and nitrogen oxide emissions, are expected to bring the entire state into attainment for O_3 and CO in 1986. Boston is expected to be in attainment in 1985.

Energy Conservation To encourage oil conservation, Mass. has developed, as part of their SIP, a procedure for allowing sources with boilers smaller than 250 million BTU to use high sulfur oil if they implement conservation measures or switch to an alternative fuel. The cost savings created as a result of using the high sulfur oil can finance the conservation or fuel switching. Three sources have already taken advantage of this initiative. SIP approvals are still required, but EPA review time has been greatly reduced.

I/M Mass. is committed to meeting a required April '83 deadline for having an I/M program (see page 16). DEQE, the Registry of Motor Vehicles, and other state agencies are working to meet this tight deadline.

State Overview: New Hampshire

State Air Director:
Dennis Lunderville, Director
Air Resources Agency
Hazen Drive, Concord, NH 03301
(603) 271-4582

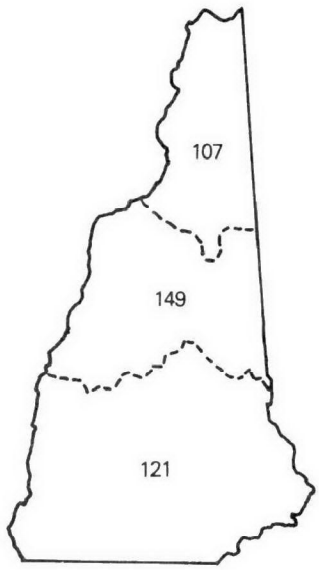
EPA State Coordinator:
Miriam Fastag
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 480 (a
No. of Permits Issued (FY'82) 49 (b
No. of Inspections (FY'82): 50 (c
No. of Class A1 Sources: 89 (c
No. of Plants with Emissions > 100 tons/yr.: 58 (d

(a estimated no. of emission points in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS



107 - Androscoggin Valley
121 - Merrimack Valley
149 - Central NH

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
TSP	107	1981	Berlin	13,084
CO	121	1980	Manchester	90,936
	121	1981	Nashua	67,865
SO_2	107	1980	Berlin	13,084
0_3	121	1981	All	791,726

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

CO and O_3 Attainment New Hampshire's O_3 attainment plan contains a series of controls on stationary and mobile VOC sources. Transportation controls designed to eliminate congestion are expected to eliminate CO problems in Manchester and Nashua by 1987.

Permit Fees The state instituted a permit fee system which imposes charges for issuing new source permits and enforcing the conditions of existing ones. All permits will now be reviewed periodically.

Regulation Reorganization In 1982, NH completed efforts to reformat and recodify their various air regulations into one uniform document. These revised regulations have been submitted to EPA for approval.

Acid Precipitation As in other New England states, the effects of acid precipitation are a major concern.

State Overview: Rhode Island

State Air Director:
Thomas Wright, Director
Division of Air & Hazardous Materials/DEM
75 Davis St., Providence, RI 02908
(401) 277-2808

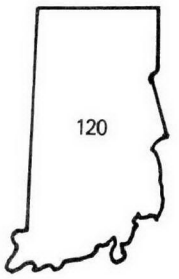
EPA State Coordinator:
Marcia Spink
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 600 (a
No. of Permits Issued (FY'82): 56 (b
No. of Inspections (FY'82) 75:(c
No. of Class A1 Sources: 93 (c
No. of Plants with Emissions
> 100 tons/yr.: 54 (d

(a estimated no. of plants in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS



120 - Met. Providence

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
CO	120	1981	Providence	156,804
O_3	120	1981	All	947,154

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

O_3 Attainment In July, Rhode Island submitted its ozone SIP which demonstrates attainment of ozone standards by the end of 1982. The state therefore no longer needs an extension past the Clean Air Act deadline of Jan. 1, 1983. The SIP requires a combination of stationary and mobile source controls. For stationary sources, specific control technologies are required for 11 categories of VOC sources. The state also received generic approval to issue emission bubbles to VOC sources (see page 14). Transportation control measures are expected to reduce emissions from mobile sources.

Sulfur Relaxations Rhode Island is expected to submit a SIP revision request which will allow the state to approve sulfur in fuel relaxations for sources which conserve energy or switch to non-oil fuels. These sources will still require individual SIP revisions, but EPA's review procedures will have been greatly simplified.

State Overview: Vermont

State Air Director:
Richard Valentinetti, Chief
Air and Solid Waste Program, AEC
State Office Building, Montpelier, VT 05602
(802) 826-3395

EPA State Coordinator:
Betsy Horne
State Programs Section
(617) 223-5130

Source Inventory

No. of Permitted Sources: 190 (a
No. of Permits Issued (FY'82): 20 (b
No. of Inspections (FY'82): 45 (c
No. of Class A1 Sources: 38 (c
No. of Plants with Emissions
> 100 tons/yr.: 20 (d

(a estimated no. of plants in permit files
(b from state grant status reports
(c estimates from CDS
(d estimates from NEDS

AIR QUALITY CONTROL REGIONS

159 - Champlain Valley
221 - Vermont

Primary Non-Attainment Areas

Pollutant	AQCR	Last Violation	Town(s)	Pop. (1980)
CO	159	1976	Burlington and adjacent towns	91,250

For a complete listing of non-attainment areas see the *1981 Report on Air Quality in New England.*

Major State Issues

Wood Burning As a state that is 75% forested, Vermont has looked to its wood resources to replace high cost oil. Wood is being used as a heating fuel for a growing number of homes and industries. Burlington Electric has recently switched to wood for one of its powerplants.

Concerns have been raised about possible health impacts from wood combustion, particularly from emissions of polycyclic organic matter (POM). Studies are underway to characterize wood emissions and to evaluate their health effects and possible control technologies.

Acid Deposition There is a great deal of state concern about acid deposition and long range transport. Research is underway to evaluate impacts on fisheries in lakes and ponds and on high alpine forested areas.

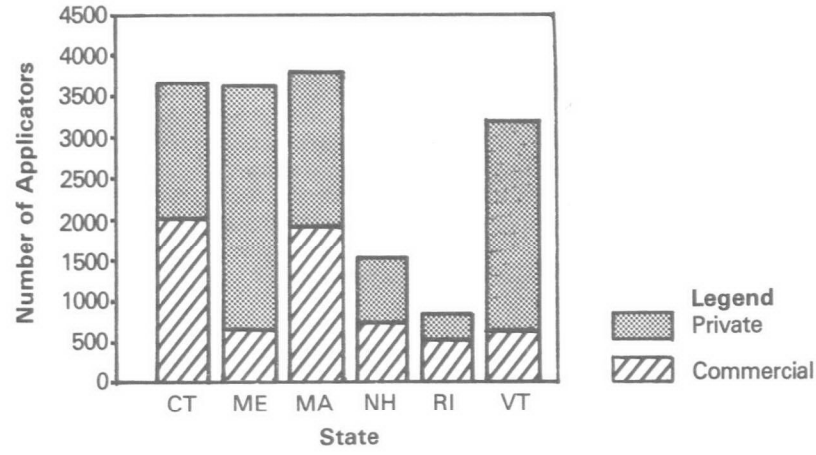
Region I's Office of Pesticides and Toxic Substances has 3 basic functions mandated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The first is to assist the 112 pesticide producers in New England in understanding and complying with the registration and classification requirements of FIFRA. Pesticide producers must submit required test results to EPA HQ before any new pesticide can be marketed. EPA uses these test results to decide if the pesticide is properly labeled (the label is considerd to be a legally enforceable set of restrictions) and to classify it according to its uses. Pesticides classified as "restricted use" can only be used by certified applicators.

Applicator certification is the second aspect of the program. EPA has delegated certification authority to all of the New England states starting with New Hampshire in 1977 and ending with Connecticut in 1979. After appropriate training by university extension specialists, commercial applicators are certified in one or more of 10 classes of pesticide use for up to 5 years. The total number of certified applicators per state is shown below, broken down into private and commercial users. Private users are agricultural producers (farmers) who use pesticides on their crops. Commercial users include anyone else who applies pesticides commercially.

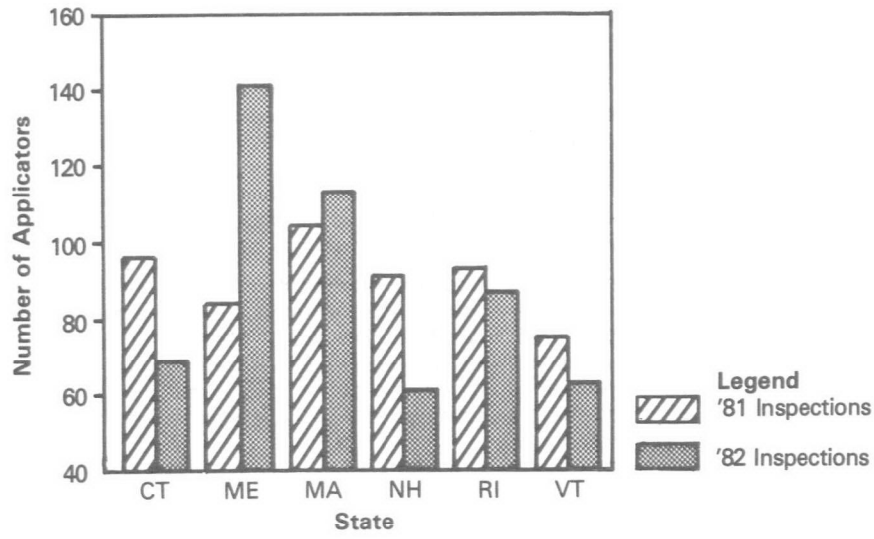
Enforcement of FIFRA requirements is the third regional program component. This authority can also be delegated, and all New England states do have responsibiliy for conducting both routine and investigative inspections resulting from citizen complaints. The number of state inspections in 1981 and 1982 is shown below. For applicators found to be in violation of applicable standards, states can issue warnings, assess penalties under state law, or, in a small number of cases, refer the investigation to EPA for federal prosecution.

One unique and successful inspection program is ongoing in Maine where the State Pesticide Control Board is using helicopters to find illegal pesticide dump sites that are undetectable from the ground. The program is financed by a $10,000 EPA grant, and has located over 100 dumps in Aroostook and Penobscot counties, all of which have been cleaned up.

COMMERCIAL AND PRIVATE PESTICIDE APPLICATORS



STATE PESTICIDE USE INSPECTIONS



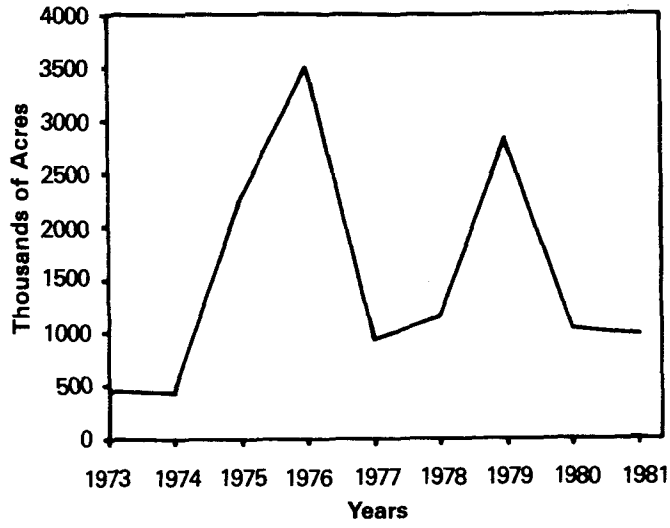
PESTICIDES

Wide-Area Spraying

The largest single pesticide application program in New England is the wide-area aerial spraying of northern Maine to control Spruce Budworm. This infestation has existed on up to 5 million of Maine's 8 million acres of spruce-fir forests for the past several years, and total spraying costs exceed $40 million. Current state and federal control efforts are focused on a 5 year integrated pest management plan.

The number of acres sprayed per year has decreased recently, in part because of EPA efforts to direct spray away from critical or sensitive areas.

MAINE SPRUCE BUDWORM CONTROL: NUMBER OF ACRES SPRAYED



TOXIC SUBSTANCES

OPTS also manages regional activities under the Toxic Substances Control Act (TSCA) which directs EPA to identify and control chemicals that pose an unreasonable risk to human health or the environment. This is done by compiling an inventory of chemicals, testing them for toxic effects, regulating those chemicals that warrant it, and requiring industry to submit premanufacturing review notices before any new chemical can be produced. EPA's headquarters has responsibility for most of these national requirements. The regional office is responsible for inspections, technical assistance to states and industries, and enforcement.

In FY'82, OPTS conduced 231 inspections in New England. These were focused on the three chemical problems outlined below.

Substance	Description
PCB's	One hundred and seventy-five million pounds of Polychlorinated Byphenyls (PCB's), a stable and toxic chemical are estimated to be in use nationally as an insulating fluid in electrical equipment such as transformers and capacitors. PCB production is now banned, but continued use is permitted under controlled conditions specified by federal law. The amount of PCB's in New England is unknown, although the region does generate 3.3% of the nation's electricity, one indicator of the relative magnitude of the problem here. Industries are required to maintain PCB containing equipment to prevent leaks or spills. This equipment must be properly labeled, and waste PCB's must be disposed of through incineration or other approved methods. To augment EPA's inspection for these requirements, the agency initiated a pilot program granting states enforcement authority. Connecticut is one of five states nationally to be selected for participation.

Asbestos

Although asbestos was once considered a hazard only for workers who handled it, it is now known to also be a potential hazard for those who are exposed to asbestos fibers used as insulation or fireproofing in schools and office buildings. Regional EPA activities have centered on a joint EPA/state program to encourage schools to voluntarily inspect for and correct deteriorating asbestos insulation.

On June 23, 1982, EPA published a final rule which requires all schools to inspect for asbestos and post warnings if it is found. The 6,600 schools in New England must comply with this requirement by June 23, 1983.

CFC's

EPA also inspects producers of chlorofluorocarbons, aerosol propellants more popularly known as freons. When released into the upper atmosphere, CFC's break down ozone. The decrease in ozone allows more ultraviolet rays to reach the earth, thus causing an increased risk from skin cancer. Because of these risks, EPA imposed a ban on all non-essential uses of CFC's as propellants.

There are less than 20 aerosol product manufacturers in New England who use CFC's as propellants. EPA monitors these manufacturers to ensure that CFC's are being produced only for essential uses such as spray cleaners of aircraft navigational equipment.

Natural Gas Contamination

The contamination of natural gas pipelines with PCB's first came to notice in 1980. The sources of the contamination are uncertain, although leaks from pipeline compressor stations are believed to have caused at least part of the problem. (Several gas transmission companies transport the natural gas a part of the way from the gulf states to local gas distributors.) In 1981, EPA began a program to identify the extent of the problem at each step of the way and take remedial action when necessary.

PCB contamination can show up in either the gas stream or in condenstate that forms within the pipeline. Gas stream concentrations have varied between trace amounts and 85 ug/m^3 under high pressure. Condensate concentrations over 1000 ppm were found in seven utilities, with 41,000 ppm being the highest value recorded. The size of the problem also varies greatly among utilities from a Boston company with 230,000 customers to much smaller utilities with only a few customers.

Information so far suggests that PCB contamination of natural gas does not present a public health problem in New England. Regional utilities are developing decontamination plans which are contingent upon their suppliers decontaminating supply lines. Two utilities are instituting monitoring programs that will provide additional data on indoor PCB concentrations. To date, no detectable quantities of PCB's have been measured in homes.

Special Topic: Powerplant Coal Conversions

There are about 40 fossil fuel powerplants in New England that together have a generating capacity of over 12,000MW. Until recently almost all of them burned oil, although many began service as coal burning units. The rapid rise in oil prices in 1973 and 1979 forced many utilities to consider switching back to coal as a primary fuel. Although oil prices are now projected to remain stable for the next few years, oil still costs about twice as much as coal, and the financial incentives for conversion are still large.

Non-economic factors also play a role in converting plants from oil to coal. Since 1974, the Department of Energy has had the authority to issue conversion orders to utilities with coal capable plants. The current conversion program is essentially voluntary, but DOE still prepares an environmental impact statement on the conversions for which they issue orders.

Conversion to coal raises a variety of environmental, engineering, and financial problems. One of the main environmental impacts is the large increase in TSP emissions caused by coal combustion, emissions that must be reduced to allowable levels by installation of electrostatic precipitators. Large amounts of fly ash are generated which must be stored and disposed of. Burning coal can also increase sulfur dioxide emissions, particularly if the plant had been burning a low sulfur oil.

Utilities must address other engineering issues such as coal unloading, storage, and handling, and any boiler modifications that are required. These modifications can be expensive; however the cost savings to consumers in the form of lower fuel adjustments, can be large as well. New England Power Company estimates that conversion of its Brayton Point plant is saving about $169 million and 12 million barrels of oil per year.

The kind of review EPA has of these conversions is determined by whether or not the projected emissions using coal exceed the SIP emission limits that apply to oil burning. If a plant can convert "in compliance" with no emissions changes greater than current limits allow, then no EPA air review may be required. Many utilities, however, have decided to take advantage of a provision in the Clean Air Act that allows EPA to grant a Delayed Compliance Order to certain converting plants. A DCO allows these plants to temporarily exceed emission limits while they are burning coal and before new TSP control equipment (an electrostatic precipitator) is installed.

EPA has issued 3 DCO's for New England powerplants and is now processing a fourth (see page 12). The largest plant to convert is the New England Electric Power Company's Brayton Point plant in Fall River, Mass. which received a DCO in 1979. Three of Brayton's units with a total capacity of 1150MW are now burning 2.5 million tons of coal/year. Both TSP and SO_2 emissions are averaging well below regulatory limits.

More experience is needed to evaluate the impact of coal conversions at other plants. The chart on the following page attempts to make an assessment of emission changes at the plants most likely to convert by showing allowable and actual emissions using oil, and expected emissions using coal during and after a DCO period. The equations and assumptions used to derive these estimates are available on request.

COAL CONVERSIONS IN NEW ENGLAND: EMISSIONS INVENTORY (TONS OF EMISSIONS/YR.)

PLANT Name (Unit #) Town/State	OIL Allowable Emissions SO_2	 TSP	OIL Actual Emissions SO_2	 TSP	COAL During DCO Expected Emissions SO_2	 TSP	COAL Post DCO Expected Emissions SO_2	 TSP
Brayton Point (1,2,3) Somerset, MA	100,950	5,006	68,077	1,608	(16,430) —8 months only —Units 1 + 2 only	(3,466)	59,080	597
Salem Harbor (1,2,3) Salem, MA	30,709	1,523	19,272	494	16,994	2,624	16,994	1,163
Mt. Tom (1) Holyoke, MA	13,803	684	10,576	286	10,192	1,353	10.192	279
West Springfield (3) West Springfield, MA	11,204	556	4,787	72	—	—	—	—
Canal (1) Sandwich, MA	52,604	2,609	31,005	515	—	—	—	—
Mystic (4,5,6) Boston, MA	18,234	1,989	7,536	342	—	—	—	—
Somerset (7,8) Somerset, MA	20,105	997	11,982	747	NA	4,056	NA	811
Bridgeport Harbor (3) Bridgeport, CT	17,124	3,114	NA	273	—	—	—	—
Schiller (4,5,6) Portsmouth, NH	15,213	2,168	6,648	NA	—	—	—	—
South Street (121,122) Providence, RI	7,769	706	2,971	68	—	—	—	—

Special Topic: Hazardous Air Pollutants

Although most of EPA's air pollution control efforts have been directed towards "criteria" pollutants, the 6 pollutants for which EPA has set ambient air quality standards, there has recently been growing concern over non-criteria pollutants as well. Section 112 of the Clean Air Act directs EPA to establish National Emission Standards for Hazardous Air Pollutants (NESHAPS) to control air pollutants suspected of damaging human health and for which there are no ambient standards. NESHAPS are EPA's primary tool to control hazardous air pollutants.

The pollutants being considered for regulation under NESHAPS controls are varied, but most are either organic chemicals or metals. Some are from sources as common as dry cleaners while others are emitted by a small number of specialized chemical manufacturers. Assessment and regulation of these chemicals involves three stages. First, potentially hazardous chemicals are assessed for possible health effects. This includes preparation of Health Assessment Documents which are reviewed by the public and EPA's Science Advisory Board. Second, EPA determines if those chemicals which have been assessed should be listed under Section 112. Finally, for those chemicals which are listed, EPA promulgates emission and performance standards which are applicable to both new and existing sources.

So far, EPA has listed 7 pollutants under Section 112 and has set emission standards for 4 of them. Twenty additional pollutants are actively being assessed for health effects. Draft health assessments for 9 of these 20 were published in the Spring of 1982. Making these assessments and setting subsequent standards requires the resolution of a variety of complex technical and policy issues such as:

- what is the magnitude of the problem?
- what criteria should be used to evaluate carcinogenicity?
- what role should risk assessment play?
- when setting standards, what margin of safety should be used?

Many states are trying to answer these questions as well, and a number of them have instituted active regulatory programs. New York and New Jersey are among the states that have already set enforceable standards. In New England, Massachusetts is in the process of developing a policy to address hazardous air pollutant problems.

NESHAPS STATUS

Chemical	Status
Acrylonitrile	Health Assessment under SAB* review
Arsenic	Listed; regulatory plans expected FY'83
Asbestos	Listed; Revised Standards expected FY'83
Benzene	Listed; Standards proposed in 1980
Beryllium	Listed; Standards exptected FY'84
Cadmium	Decision on listing expected FY'83
Carbon Tetrachloride	Health Assessment under SAB review
Chlorofluorocarbon 113	Health Assessment under SAB review
Chloroform	Health Assessment expected 1/83
Chromium	Health Assessment expected 1/83
Coke Oven Emissions	Health Assessment under SAB review
Dioxin	Health Effects under review
Epichlorohydrin	Health Assessment exptected 1/83
Ethylene dicloride	Health Assessment expected 1/83
Ethylene Oxide	Health Assessment expected 1/83
Formaldehyde	Health Assessment under development
Manganese	Health Assessment under development
Mercury	Listed; Revised Standards expected FY'84
Methyl Chloroform	Health Assessment under SAB review
Methylene Chloride	Health Assessment under SAB review
Nickel	Health Assessment under development
Perchloroethylene	Health Assessment under SAB review
Radionuclides	Listed; Recent Court decision requires regulations in FY'83
Toluene	Health Assessment under review; not expected to be listed
Trichloroethylene	Health Assessment under SAB review
Vinyl Chloride	Listed; revised Standards expected in FY'84
Vinylidene Chloride	Health Assessment possible 1/83

*SAB = Science Advisory Board

Special Topic: Acid Precipitation

Acid precipitation is generally defined as the wet and dry deposition of acidic substances. The debate over the causes and results of acid precipitation is probably the most vigorous and controversial of any air quality problem. Some of the major issues now being researched are discussed below.

Evidence of Acid Precipitation. There is considerable controversy over our ability to document trends in precipitation acidity over the last several decades. Hubbard Brook Experimental Forest in New Hampshire is the only place in North America where consistent pH measurements have been taken for 2 decades, and no trend is evident. Nontheless, analysis of information that is available suggests 1) that an observable increase in acidity has occurred in rainfall over the eastern U.S. and Canada, and 2) that the pH of rain and snow in the northeast is often about 4 but sometimes can be as low as 3 or as high as 5.

Sources of Acid Precipitation. Sulfur dioxide and oxides of nitrogen appear to be the major precursors of acid deposition. Both gases originate from natural and man-made sources, although anthropogenic emissions of sulfur dioxide are estimated to be substantially larger than natural emissions. About eighty percent of the man-made SO_2 emissions are estimated to be from stationary sources. Sixty-one percent of man-made NO_x emissions are from stationary sources while the remainder are from mobile sources. Secondary contributors or inhibitors such as ammonia, hydrochloric acid, and ozone also play uncertain roles in forming acid precipitation.

Atmospheric Processes. Depending on the conditions of their release, sulfur and nitrogren oxide can either be dispersed locally or transported hundreds of miles from their point or origin. Three processes, atmospheric transport, chemical and physical transformation, and deposition determine the relationship between source and receptor. To date, there has been limited success in scientifically describing these processes. Research now underway is attempting to construct accurate models that can describe acid deposition and be used to develop control strategies.

Effects of Acid Deposition. Research efforts are currently evaluating effects on ecological systems, materials, and human health. Ecological impacts include impacts on both aquatic and terrestrial systems. Effects on aquatic systems are not as well documented in this country as in Canada and Scandanavia, where scientists project that thousands of lakes may become excessively acidic by the year 2000. However, it is known that many lakes in the northest and upper midwest are showing stress from increased acidity, stress that is reflected in lower fish populations. Much less is certain about effects on crops, forests, and soils.

Acid precipitation may also affect materials (such as buildings, monuments, sculptures) although it is difficult to separate long range acid precipitation effects from locally generated SO_2 deposition. Research on health effects is focusing on acidification of drinking water reservoirs which could lead to increases in dissovled metals.

Research. Federal funding of acid precipitation research is coordinated by the Interagency Task Force on Acid Precipitation. Funding for this research increased from $11 million in 1980 to $18 million in 1982. Half of this research was funded by EPA while the rest was funded by the Departments of Energy, Interior, and other federal agencies. The list on the following page shows EPA funded research now going on in New England.

CURRENT ACID PRECIPITATION RESEARCH IN NEW ENGLAND

Title	Researchers	EPA Funding
1. An analysis of historical and recent water chemistry data for New Hampshire lakes and ponds	Hattorman, S.G. Duerring, C.K. (UNH)	$ 5,000
2. Vulnerability of lakes and streams in the northeastern U.S. to acidification from long range transport of air pollution	Haines, T.A. (Univ. of ME)	48,000
3. Heavy metal exchange between sediments and overlying water and diatom community response in lake microorganisms subjected to increased H^+, Pb, and Zn loading	Daris, R.B. Norton, S.A. (Univ. of ME)	NA
4. Experimental field studies to evaluate the effects of acidification on stream ecosystems	Likens, G. Hall, R. (Hubbard Brook)	59,000
5. Effects of acidic precipitation on Atlantic Salmon rivers in the U.S.	Haines, T.A. (Univ. of ME)	48,000
6. Effect of acid precipitation on microbial mineralization of nitrogen in soil	Alexander, M. (Cornell)	68,129
7. Assessing the importance of aluminum as a link between acid precipitation and decreased forest growth	Johnson, A.H. (several N.E. forests)	6,300
8. Acidic deposition effects on boreal ecosystems	Vogelmann, H.W. Klien, R.H. (UVM)	NA
9. Identification of fresh waters susceptable to acidification	Kendrey, G.R. Kaplan, E. (Brookhaven)	258,000

ACRONYMS

AEROS	Aerometric and Emissions Reporting System
AMIS	Air Management Information System
APCA	Air Pollution Control Association
AQCR	Air Quality Control Region
BACT	Best Available Control Technology
CAA	Clear Air Act
CDS	Compliance Data System
CFM	Chlorofluoromethanes
CO	Carbon Monoxide
CTG	Control Technology Guidelines
DCO	Delayed Compliance Order
EIS	Environmental Impact Statement
FONSI	Finding of No Significant Impact
HATREMS	Hazardous and Trace Emissions System
HC	Hydrocarbons
IP	Inhalable Particulates
LAER	Lowest Achievable Emission Rate
NAAQS	National Ambient Air Quality Standards
NAMS	National Air Monitoring System
NECRMP	Northeast Corridor Regional Modeling Project
NEDS	National Emissions Data System
NEPA	National Environmental Policy Act
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
O_3	Ozone
OPTS	Office of Pesticides and Toxic Substances
PCB	Polychlorinated Biphenyls
PSD	Prevention of Signficant Deterioration
RACT	Reasonably Available Control Technology
SARODS	Storage and Retrieval of Aerometric Data
SIP	State Implentation Plan
SLAMS	State/Local Air Monitoring Systems
SO_2	Sulfur Dioxide
TSCA	Toxic Substances Control Act
TSP	Total Suspended Particulates
VOC	Volatile Organic Compounds