

Air



# Implementation Strategy for the Clean Air Act Amendments of 1990



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

JAN 15 1991

OFFICE OF  
AIR AND RADIATION

Honorable William K. Reilly  
Administrator  
U.S. Environmental Protection Agency  
401 M. Street, S.W.  
Washington, D.C. 20460

Dear Mr. Reilly:

The Clean Air Act Amendments of 1990 were signed into law by President Bush on November 15, 1990. These Amendments direct the Environmental Protection Agency to implement strong environmental policies and regulations that will ensure cleaner air for all Americans.

As you requested, the Office of Air and Radiation has developed the enclosed implementation strategy for the Clean Air Act Amendments of 1990 within 60 days of enactment. It reflects the steps that EPA plans to take over the next two years to meet the challenge presented by this landmark environmental legislation.

The strategy summarizes our plans to ensure the effective implementation of the Clean Air Act Amendments of 1990 within the timeframes set by Congress. Implementation principles have been designed to apply to the guidelines and regulations that will be developed to meet statutory requirements. These principles are presented in Enclosure I and reflect three themes:

- (1) Building on the President's goal to balance environmental protection and economic growth, market-based approaches and innovative strategies will be utilized, where appropriate. Policies will be structured to offer incentives, choice, and flexibility to find the best solutions for obtaining environmental benefits at the lowest cost.

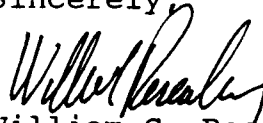
(2) Because of the ambitious regulatory agenda outlined by the statute, broad consultation will be undertaken to build, where possible, consensus with interested organizations. Efforts to receive timely input include: consulting with several Clean Air Act advisory committees; using, where appropriate, formal regulatory negotiation procedures; and scheduling informal discussions with industry, environmental, state and local, labor, and federal organizations to discuss specific issues and to receive input early in the rulemaking process.

(3) Meeting deadlines is essential! The implementation strategy outlines the groundwork underway to ensure that commitments will be met.

The implementation strategy emphasizes the regulatory and communication activities that will be undertaken during the first two years after enactment. Highlights of these activities are presented in Enclosure II. The strategy briefly summarizes a number of major activities and issues associated with each title of the Amendments. In addition, timelines illustrating the principal statutory requirements through the year 2010 are included.

Planning for implementing the Clean Air Act Amendments of 1990 will be a dynamic process. We will continually review the implementation activities for effectiveness, and make corrections as necessary. The Office of Air and Radiation will update the enclosed implementation strategy on an annual basis, focusing on the forthcoming two year period.

Sincerely,



William G. Rosenberg  
Assistant Administrator  
for Air and Radiation

Enclosures (3)



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

IMPLEMENTATION PRINCIPLES  
FOR THE CLEAN AIR ACT AMENDMENTS OF 1990

OFFICE OF  
AIR AND RADIATION

PROMISE OF THE CLEAN AIR ACT

- o "Every American expects and deserves to breathe clean air..."  
President Bush
- o These principles will guide us as we turn the promise of the Act into a legacy of clean air.

POLICY

- o E<sup>3</sup>: Achieve and maintain a healthy environment, while supporting strong and sustainable economic growth and sound energy policy.
- o Market-based: Use market-based approaches and other innovative strategies to creatively solve environmental problems.

BUILD CONSENSUS

- o Joint Venture: Recognize the essential role played by state and local governments.
- o Consultation: Conduct early and frequent discussions with interested parties, including other government organizations, industry, environmental groups, and academics. Where appropriate, use negotiation techniques to resolve critical issues.
- o Federal Coordination: Work closely with other EPA offices, other Federal agencies, and Congress to ensure a coordinated approach that will achieve environmental objectives in the most efficient manner possible.

MANAGEMENT

- o Deadlines: Establish and meet commitments to effectively implement key provisions of the Act.
- o Team Effort: Work together; attract and retain a diverse and talented workforce.

Enclosure 2

# CLEAN AIR ACT AMENDMENTS OF 1990 IMPLEMENTATION SCHEDULE HIGHLIGHTS: THE FIRST TWO YEARS

Communications Focus

Regulatory Activities

<i>Getting Started</i>	DEC 1990	Title I Nonattainment: Issue "Getting Started" Letter to Governors STATES Submit Request/Justification for 5% Classification Adjustments
<i>State &amp; Local Responsibilities</i>	JAN 1991	Publish Two-Year Implementation Strategy Title I - Nonattainment: Publish Notice of Initial PM-10 Moderate Nonattainment Areas Initiate Additional PM-10, SO <sub>2</sub> , Lead Designation Process
<i>Building Consensus</i>	FEB 1991	Title I - Nonattainment: Act on 5% Classification Adjustment Requests
<i>Voluntary Reductions</i>	MAR 1991	Title I - Nonattainment: STATES Submit Nonattainment Area Designations Title III - Air Toxics: Publish Draft Chemical List Petition Procedures Publish 90/95% Early Reduction Guidance Propose List of High Risk Pollutants (Lesser Quantity Cutoffs, 90-95% Early Reduction)
<i>Permit Program</i>	APR 1991	Title I - Nonattainment: STATES Submit PM-10 Areas Unable to Attain by 1994 STATES Respond to List of PM-10, SO <sub>2</sub> , Lead Nonattainment Areas Title III - Air Toxics: Publish Draft List of Source Categories Title V Permits: Propose State Permit Regulations

Communications Focus

Regulatory Activities

<i>Cleaner Cars and Cleaner Fuels</i>	MAY 1991	<p>Title I - Nonattainment:  STATES' Deadline for Reasonably Available Control  Technology Requirements (Deficiency Corrections)  Notify STATES of Intent to Modify Suggested  Boundaries  Publish Guidance on Stationary Source CO Contributions  Finalize Criteria to Measure Ozone Transport</p> <p>Title II - Mobile Sources:  Finalize Gasoline Reid Vapor Pressure Regulations  Finalize Tier I Car and Truck Standards  Propose Reformulated Gasoline Requirements  Propose Clean Fuels Fleet and California Pilot Credit  Programs  Propose Urban Bus Regulations  Propose Emission Control Diagnostic Rule</p> <p>Title III - Air Toxics:  Propose Standards for Large Municipal Waste  Combustors  Publish Final Chemical List Petition Procedures</p> <p>Title IV - Acid Rain:  Propose Regulations for Auctions and Sales</p> <p>Title VI - CFCs:  Propose CFC Phase-out Regulations</p>
<i>Protecting the Ozone Layer</i>	JUNE 1991	<p>Title I - Nonattainment:  Propose PM-10 Area Reclassifications</p> <p>Title VI - CFCs:  Propose Mobile Air Conditioning Recycling Regulations</p>
<i>Assisting Small Businesses</i>	JULY 1991	<p>Title I - Nonattainment:  Propose Revisions to New Source Review Program  Finalize Ozone, CO Nonattainment Boundaries  Finalize List of Additional PM-10 Nonattainment  Areas and SO<sub>2</sub>, Lead Designations</p> <p>Title V - Permits:  Publish Guidance on State Assistance to Small  Businesses</p> <p>Title VII - Enforcement:  Propose Administrative Penalties Rules of Practice</p>

Communications Focus	Regulatory Activities
<i>Attainment of Air Quality Standards</i>	<p>AUG 1991</p> <p>Title I - Nonattainment:  Propose PM-10 Reasonably Available Control Measures/  Best Available Control Measures Guidance  Issue Transportation Planning Guidance  Publish Title I General Preamble  Publish 1990 Air Quality Data</p> <p>Title II - Mobile Sources:  Publish Marketable Gasoline Oxygen Credit Guidelines</p> <p>Title VII - Enforcement:  Propose Rules for Citizen Suits</p>
<i>Acid Rain</i>	<p>SEPT 1991</p> <p>Title IV - Acid Rain:  Propose Emission Trading System  Propose Acid Rain Permit Program  Propose Continuous Emission Monitor Requirements  Propose NOx Requirements for Utility Boilers  Propose Conservation and Renewable Incentives</p> <p>Title VI - CFCs:  Finalize CFC Phase-out Regulations</p>
<i>Business Opportunities in the Clean Air Act</i>	<p>OCT 1991</p> <p>Title I - Nonattainment:  Publish VOC and CO Emission Inventory Guidance</p> <p>Title II - Mobile Sources:  Finalize Cold Temperature CO Standards  Publish Study on Non-road Engines</p> <p>Title III - Air Toxics:  Propose Maximum Achievable Control Technology for Coke Ovens</p>

## Communications Focus

## Regulatory Activities

<i>One Year of Progress Toward Cleaner Air</i>	NOV 1991	<p>Title I - Nonattainment:</p> <ul style="list-style-type: none"> <li>Propose Tank Vessel Rule</li> <li>Publish Conformity Criteria</li> <li>Publish Guidance on Control Cost-effectiveness</li> <li>STATES Submit PM-10 State Implementation Plans</li> <li>Publish Outer Continental Shelf Rule</li> <li>Publish Guidance on Inspection/Maintenance Programs</li> <li>Publish Guidance on Transportation Control Measures</li> </ul> <p>Title II - Mobile Sources:</p> <ul style="list-style-type: none"> <li>Propose Clean Fuel Vehicle Standard</li> <li>Finalize Vehicle Evaporative Emissions Regulations</li> <li>Finalize Onboard Controls</li> <li>Finalize Reformulated Gasoline Requirements</li> <li>Finalize Urban Bus Regulations</li> <li>Finalize Clean Fuels Fleet and California Pilot Credit Program</li> </ul> <p>Title III - Air Toxics:</p> <ul style="list-style-type: none"> <li>Publish Final List of Source Categories</li> <li>Propose Guidance for Modification Provisions</li> <li>Publish Draft Regulatory Schedule for All Source Categories</li> <li>Finalize Standards for Large Municipal Waste Combustors</li> <li>Propose List of Substances for Accidental Releases Prevention Program</li> <li>Propose Maximum Achievable Control Technology for Hazardous Organic Chemical Manufacturing</li> <li>Propose Maximum Achievable Control Technology for Dry Cleaners (per court order)</li> <li>Finalize List of High Risk Pollutants (Lesser Quantity Cutoff, 90%/95% Early Reductions)</li> </ul> <p>Title IV - Acid Rain:</p> <ul style="list-style-type: none"> <li>Finalize Regulations for Auctions and Sales</li> </ul> <p>Title V - Permits:</p> <ul style="list-style-type: none"> <li>Finalize State Permit Regulations</li> <li>Propose Federal Permit Regulations</li> </ul> <p>Title VI - CFCs:</p> <ul style="list-style-type: none"> <li>Ban Nonessential Uses</li> <li>Finalize Mobile Air Conditioning Recycling Regulations</li> </ul> <p>Title VII - Enforcement:</p> <ul style="list-style-type: none"> <li>Propose Rules for Field Citation Program</li> <li>Propose Rules for Contractor Listing</li> </ul>
<i>Air Toxics</i>	DEC 1991	<p>Revise Two-Year Implementation Strategy</p> <p>Title I - Nonattainment:</p> <ul style="list-style-type: none"> <li>Finalize PM-10 Area Reclassifications</li> </ul> <p>Title IV - Acid Rain:</p> <ul style="list-style-type: none"> <li>Propose List of Phase II Utility Allowances</li> </ul>



Communications Focus

Regulatory Activities

<b>Enforcement</b>	JAN 1992	Title III - Air Toxics: Propose Standards for Small Municipal Waste Combustors Title VII Enforcement: Finalize Administrative Penalties Rules of Practice
	FEB 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Chromium Electroplating Title VII Enforcement: Propose Monetary Awards Rules
	MAR 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Commercial Sterilizers
	APR 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Asbestos
	MAY 1992	Title I Nonattainment: Finalize PM-10 Reasonably Available Control Measures/Best Available Control Measures Guidance Finalize Revisions to New Source Review Program Finalize Rules for Ozone, NOx, VOC Enhanced Monitoring Title II Mobile Sources: Finalize Emission Control Diagnostic Rule Publish Mobile-Source Related Air Toxics Study Title III - Air Toxics: Finalize Guidance for Modification Provisions Title IV - Acid Rain: Finalize Emission Trading System Finalize Continuous Emission Monitor Requirements Finalize NOx Requirements for Utility Boilers Finalize Conservation and Renewable Incentives Finalize Acid Rain Permit Program Title V - Permits: Finalize Federal Permit Program Title VI - CFCs: Finalize CFC and HCFC Labelling Regulations Title VII - Enforcement: Propose Rules for Compliance Certification
	JUNE 1992	
	JULY 1992	

## Communications Focus

## Regulatory Activities

	AUG 1992	Title I - Nonattainment: Publish 1991 Air Quality Data Title VII - Enforcement: Finalize Guidance/Rules for Citizen Suits
	SEPT 1992	
	OCT 1992	Title III - Air Toxics: Finalize Maximum Achievable Control Technology for Coke Ovens
<i>Meeting the Deadlines in the Clean Air Act</i>	NOV 1992	<p>Title I - Nonattainment: Finalize Tank Vessel Rule Finalize Rules for Economic Incentives Program Propose First Set of NSPS Rules STATES Submit RACT Catch-up Rules, NSR Rules, CO Attainment Demonstration, and Contingency Measures STATES Submit Base Year Ozone/CO Emission Inventories</p> <p>Title II - Mobile Sources: Finalize Clean-Fuel Vehicle Standards Determine Significance of Non-road Engine Emissions</p> <p>Title III - Air Toxics: Finalize Maximum Achievable Control Technology for Dry Cleaners (per court order) Finalize Maximum Achievable Control Technology for Hazardous Organic Chemical Manufacturing Finalize Regulatory Schedule for All Source Categories Finalize List of Substances for Accidental Releases Prevention Program</p> <p>Title VI - CFCs: Finalize Safe Alternatives Program</p> <p>Title VII - Enforcement: Finalize Guidance/Rules for Field Citation Program Finalize Guidance/Rules for Contractor Listing Finalize Rules for Monetary Awards</p>
	DEC 1992	<p>Title III - Air Toxics: Finalize Standards for Small Municipal Waste Combustors</p> <p>Title IV - Acid Rain: Finalize List of Phase II Utility Allowances</p>

# **IMPLEMENTATION STRATEGY FOR THE CLEAN AIR ACT AMENDMENTS OF 1990**

**United States Environmental Protection Agency  
Office of Air and Radiation**

**January 15, 1991**

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## **IMPLEMENTATION STRATEGY FOR THE CLEAN AIR ACT AMENDMENTS OF 1990**

### **1.0 IMPLEMENTATION OVERVIEW**

When President Bush signed into law the Clean Air Act Amendments of 1990 on November 15, 1990, he stated, " Today, we add a long-awaited and long-needed chapter in our environmental history, and we begin a new era for clean air." Truly, this law represents the most significant piece of environmental legislation ever passed to control air pollution. It directs the United States to implement strong environmental policies and regulations that will ensure cleaner air for all Americans. To achieve this goal, the Environmental Protection Agency's (EPA) implementation strategy will not only employ traditional approaches for controlling air pollution, but also strive to harness the power of the marketplace, encourage local initiatives, and emphasize pollution prevention. These efforts will be structured to achieve environmental benefits in a cost-effective manner, ensuring consistency with national energy and economic policies.

The Clean Air Act Amendments of 1990 signify a new era in environmental regulation, offering solutions to some of the most resistant environmental problems by promoting the use of innovative regulatory approaches. The EPA Administrator, William K. Reilly, has stated that, once fully implemented, the Amendments will:

- o Remove 56 billion pounds/year of pollution from the air (224 pounds/year for every man, woman, and child in the United States);
- o Reduce by 50% emissions causing acid rain;
- o Reduce by 75% emissions and resulting risks from toxic air pollutants;
- o Result in cleaner cars, fuels, factories, and powerplants;
- o Assure that all areas of the country meet the national ambient air quality standards;
- o Reduce damage to lakes, streams, parks, and forests;



## *Implementation Strategy for the Clean Air Act Amendments of 1990*

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- o Reduce oil imports significantly; and
- o Reverse the historical degradation of visibility in the country's most scenic areas.

This document outlines the overall implementation schedule for the statutory requirements, summarizes regulatory efforts currently underway, identifies some of the major issues that will be addressed early in the implementation process, and describes the steps that the Agency is undertaking to ensure the efficient and effective implementation of the legislation. Emphasis has been placed upon the first two years after enactment. More than 25 rules will be developed in the first year and more than 55 in the first two years. Thus, activities undertaken in these years are critical. They will lay the foundation for effective implementation of the Clean Air Act Amendments of 1990.

Planning to implement the Clean Air Act Amendments of 1990 is a dynamic process. The EPA intends to review continually all activities undertaken to implement the Amendments, assess their effectiveness, and make modifications as necessary. This implementation strategy will be updated on an annual basis, with each revision focusing on the forthcoming two-year period.

## **2.0 CLEAN AIR ACT IMPLEMENTATION PRINCIPLES**

The EPA is committed to implementing the Clean Air Act Amendments of 1990 wisely, quickly, and effectively. To meet this goal, EPA has developed implementation principles to guide the Agency as it turns the promise of the Clean Air Act Amendments of 1990 into reality.

These implementation principles are presented in Figure 1. They emphasize three areas. First, the Agency's policies will be developed to ensure a healthy environment while supporting national economic and energy policies. Whenever possible, traditional approaches to solving environmental problems will be supplemented with broader use of market incentives and other innovative approaches. Second, EPA recognizes that it cannot implement the Clean Air Act Amendments of 1990 alone; effective rulemaking requires the greatest possible consultation and consensus. Many steps are being initiated to ensure that the views of interested parties (e.g., state and local governments, industry, environmental groups) will be presented to the Agency early in the rulemaking process. Finally, internal Agency procedures will be modified to ensure effective management of the implementation activities to meet the deadlines specified by Congress.





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

IMPLEMENTATION PRINCIPLES  
FOR THE CLEAN AIR ACT AMENDMENTS OF 1990

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- o **E<sup>3</sup>:** Achieve and maintain a healthy environment, while supporting strong and sustainable economic growth and sound energy policy.
- o **Market-based:** Use market-based approaches and other innovative strategies to creatively solve environmental problems.

BUILD CONSENSUS

- o **Joint Venture:** Recognize the essential role played by state and local governments.
- o **Consultation:** Conduct early and frequent discussions with interested parties, including other government organizations, industry, environmental groups, and academics. Where appropriate, use negotiation techniques to resolve critical issues.
- o **Federal Coordination:** Work closely with other EPA offices, other Federal agencies, and Congress to ensure a coordinated approach that will achieve environmental objectives in the most efficient manner possible.

MANAGEMENT

- o **Deadlines:** Establish and meet commitments to effectively implement key provisions of the Act.
- o **Team Effort:** Work together; attract and retain a diverse and talented workforce.



### **3.0 POLICY**

A major challenge of the Clean Air Act Amendments of 1990 will be to develop programs that provide environmental protection while fostering continued economic growth and sound energy policy. The Clean Air Act Amendments of 1990 offer incentives, choice, and flexibility to achieve ambitious environmental goals at the lowest cost to society. The EPA's policies will include making full use of innovative market-based approaches. The Amendments create incentives to utilize resources in the cleanest, technologically feasible manner; at the same time, they offer inducements to increase energy conservation. If successfully implemented, the law will serve as a model for regulatory reform, leading to the widespread use of market approaches here and abroad.

Several progressive and creative new themes are embodied in the Clean Air Act Amendments of 1990. Specifically, the new law:

- o Encourages the use of market-based principles and other innovative approaches, such as performance-based standards and the banking and trading of emissions;
- o Provides a framework to promote the use of cleaner fuels by setting standards that can be met through the most cost-effective combination of fuels and technology in centrally-fueled fleets in the worst nonattainment areas and in a California pilot program;
- o Promotes the use of clean low sulfur coal and natural gas, as well as innovative technologies to clean high sulfur coal through the acid rain program; and
- o Promotes energy conservation.

Pollution prevention activities as well as early emission reductions will be emphasized throughout the implementation of the Clean Air Act Amendments of 1990. For example, in controlling emissions of hazardous air pollutants, industries will be encouraged to use the provisions which allow an alternative compliance date in exchange for voluntarily implementing an early emission reduction program. Effective implementation of this provision will allow industry flexibility in achieving emission reductions and will result in early environmental benefits.

## **4.0 BUILDING CONSENSUS**

The regulatory timeframes identified in the Clean Air Act Amendments of 1990 are ambitious, but achievable. These timeframes, however, can only be effectively met if consultation with interested parties on regulatory issues is begun early. The EPA recognizes that it cannot achieve the goals of the Amendments alone; effective rulemaking on tight timetables requires the greatest possible consensus. Standard notice and comment procedures will, of course, be the principal avenue for formal public participation in developing regulations. A number of additional activities, however, are planned to ensure that all possible routes of consultation are used. Critical players will include state and local governments, Administration officials, labor, industry, academia, and environmental groups. Many steps have been initiated to educate and involve all interested parties who wish to participate in the regulatory process. These activities are briefly described below.

### **4.1 Communication Activities**

A key first step in building consensus is educating the public about the statutory requirements of the Clean Air Act Amendments of 1990. The EPA has initiated a series of efforts to communicate information to all key audiences, including state and local officials (including, but not limited to, air pollution control officials, governors, state legislators, state attorneys general, mayors, and other local officials); regulated and affected businesses (both small and large); public interest groups, environmentalists, labor unions, citizen groups and members of the general public; other federal agencies; Members of Congress and their staffs; the international community; and the research and academic communities.

Critical to the outreach effort is a series of national and regional workshops to explain the Clean Air Act Amendments of 1990 to target audiences. In November 1990, EPA cosponsored a national videoconference with the Public Broadcasting System to discuss the impacts of the Amendments on small businesses. The EPA is currently working with the Air and Waste Management Association and the American Bar Association to hold a similar videoconference for business and other interested parties on February 21, 1991. The EPA is also cosponsoring a series of at least ten regional workshops with the American Lung Association and the State and Territorial Air



Pollution Program Administrators/Association of Local Air Pollution Control Officials. Beginning in January 1991, these one and one-half day long conferences will enable state and local officials, the general public, members of the regulated community and others to discuss the Clean Air Act Amendments of 1990 and issues related to its implementation.

The EPA's communication efforts also include the development and dissemination of documents outlining the provisions in the Clean Air Act Amendments of 1990. These include detailed and summary overviews of the new law. A list of the documents that are currently available is presented in Appendix A. The EPA is also exploring other methods of outreach to the interested public, including citizen guides, videotapes, and journal articles.

In addition to its initial educational efforts, EPA recognizes the need for communication activities to continue throughout implementation of the Clean Air Act Amendments of 1990. Thus, EPA officials will continue making many presentations around the country about the new law and the Agency's efforts to implement it. To the extent possible, many of the outreach efforts will focus on upcoming regulatory efforts and the need to build consensus and educate the public about impending regulatory actions.

#### **4.2 Joint Venture**

A critical role will be played by state and local governments during the implementation of the Clean Air Act Amendments of 1990. Successful implementation requires a joint effort by federal, state, and local governments. The Agency will work closely with state and local agencies in all aspects of implementation, particularly in those programs for which state and local governments are responsible. The EPA plans to develop the tools, guidance, training and rules, as well as provide funds, that will enable states to perform such critical activities as developing operating permit programs and creating emissions inventories. The EPA recognizes that state and local agencies have valuable and extensive experience in many areas (e.g., permitting). Therefore, the Agency will request state and local participation in many EPA work groups on specific regulations, guidelines, and studies.

As appropriate, model legislation will be developed to assist state agencies that will require new legislative authority in order to implement various requirements of the new law. In addition, EPA will continue to provide technical assistance to states through

such programs as the National Air Toxics Information Clearinghouse, the Control Technology Center, and the Air Risk Information Support Center.

### **4.3 Consultation**

In order to meet tight timelines required by statute, consultation with critical players must begin early. The EPA is planning to conduct early and frequent discussions with interested parties in three ways: (1) committees established under the Federal Advisory Committee Act (FACA); (2) formal negotiated rulemakings; and (3) informal discussions. Representatives for various groups will be selected from all interested sectors, including industry, state and local governments, labor, agriculture, environmental groups, citizen groups, and academia. These consultations are not intended to obviate the standard notices of proposed rulemakings and comment periods undertaken through the Administrative Procedures Act. Rather, these efforts will supplement and enhance standard procedures.

The EPA is currently involved in several committees constituted under FACA. These committees are divided by the primary type of advice that is given: technical or policy. All meetings held by FACA committees are open to the public.

The technical advisory groups utilized by EPA include: the National Air Pollution Control Techniques Advisory Committee (NAPCTAC), the Clean Air Scientific Advisory Committee (CASAC), and the Science Advisory Board (SAB). The NAPCTAC advises EPA on the economic and technological feasibility of alternative air pollution control techniques. It also reviews EPA information documents on control techniques for sources regulated under sections 111 and 112 of the Clean Air Act. The CASAC advises the Agency on technical issues relating to the national ambient air quality standards (NAAQS). It reviews the scientific basis for the levels of the primary and secondary NAAQS, advises EPA on the effects of various attainment strategies, and suggests research projects. This committee is part of a broader Science Advisory Board which provides scientific and technical advice on a variety of subjects including, but not limited to, risk assessment, exposure modeling, and monitoring.

The Stratospheric Ozone Protection Advisory Committee (SOPAC) and two new committees established by EPA for the Clean Air Act Amendments of 1990 - the Clean Air Act Advisory Committee (CAAAC) and the Acid Rain Advisory Committee (ARAC) - have been established primarily to provide policy advice to the Agency. The SOPAC provides policy and technical advice to EPA on its program to implement the

Montreal Protocol and protect the stratospheric ozone layer. The CAAAC is currently being established. It will provide policy advice on EPA's regulatory and programmatic strategies for implementing the Clean Air Act Amendments of 1990. Finally, the ARAC will provide policy and technical advice to EPA to aid in the development of the new acid rain program. An initial meeting was held in mid-December 1990 with the full ARAC. Four ARAC subcommittees have been established to focus on the following areas: (1) the allowance trading and tracking system; (2) permitting and technology; (3) emissions monitoring and tracking; and (4) energy conservation and renewables.

The Agency may also elect to use a formal negotiated rulemaking procedure, commonly referred to as "reg neg". Under this process, a committee is established under FACA that fairly represents all interest groups. Issues are identified and resolved in a collective manner. The regulatory negotiation process allows interested parties to have a more direct input into the drafting of regulations, thus ensuring that the rule is more sensitive to the needs and restrictions of both the parties and EPA. Rules drafted by negotiation have been found to be more pragmatic and more easily implemented at an earlier date, thus providing the public with the benefits of the rule while minimizing the negative impact of a poorly conceived or drafted regulation.

The regulatory negotiation process is usually effective where the standard(s) have a broad impact, where the participants have an incentive to negotiate, where issues are complex, and where interest can be identified and represented. In the past, EPA has successfully used this process to develop air pollution control standards for woodstoves and equipment leaks at chemical plants.

Finally, a third forum for consultation will be informal discussions with interested parties. The EPA is committed to sharing information with, and soliciting information from, interested parties early in the regulatory development process. Therefore, informal meetings will be held on specific issues on an ad hoc basis. For example, a meeting was held in early December with representatives from industry, state and local governments, as well as environmental groups, to discuss the permit regulations being developed under Title V. Similar meetings will be held in the future, as appropriate, to discuss specific regulations and associated issues, and to provide public perspectives to EPA as it deliberates on proposed regulations.

## **5.0 THE REGULATORY PROCESS**

The EPA has traditionally followed a standard process for developing regulations. This process is illustrated in Figure 2. The public is informed of a proposed Agency action through a notice of proposed rulemaking. Public comments are solicited at the time this notice is published in the Federal Register. These comments are considered as EPA finalizes the regulations.

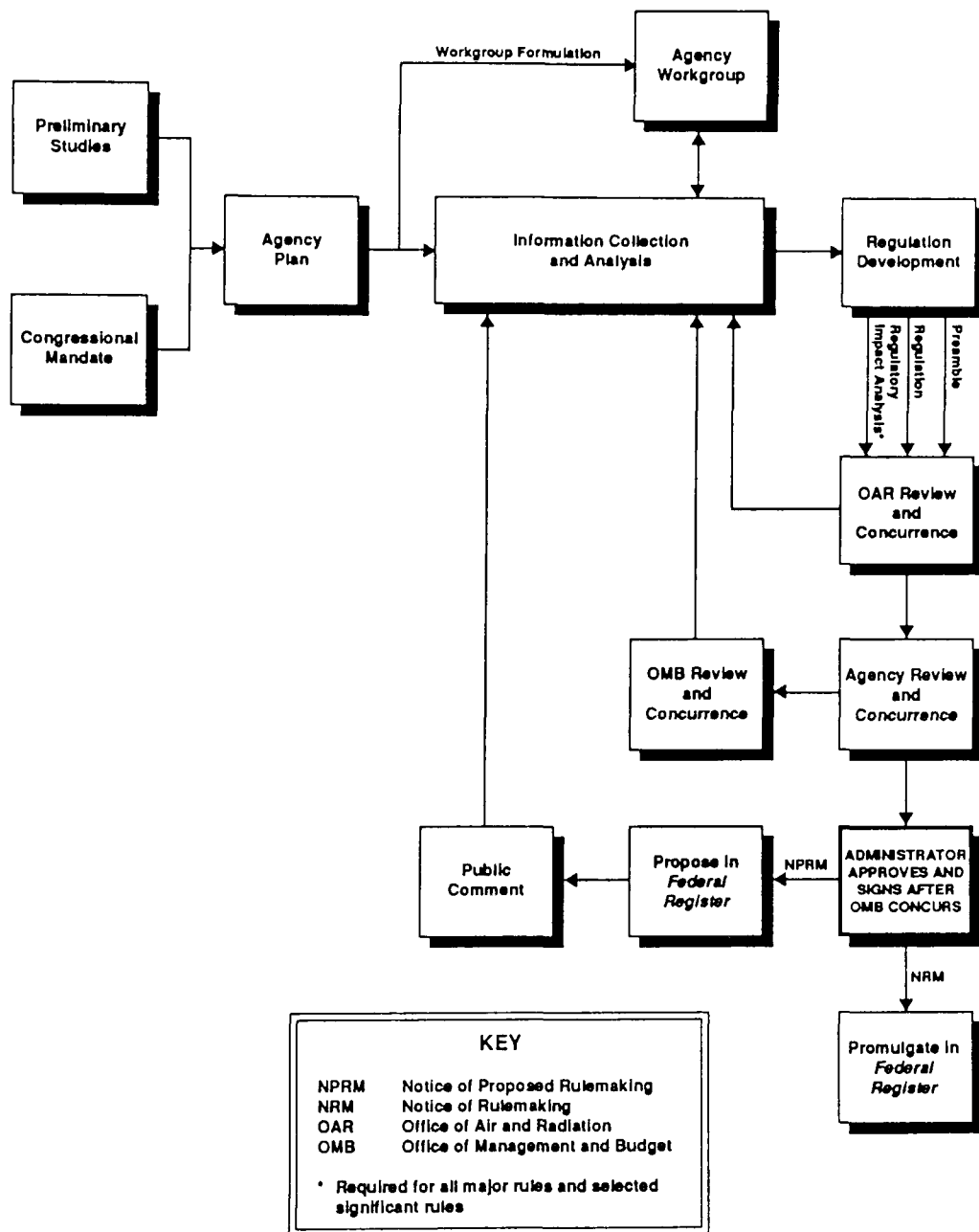
The Clean Air Act Amendments of 1990 require publication of over 25 rules in the first year and over 55 rules within the first two years. The EPA's traditional process will not suffice to meet the demands of issuing such a large number of regulations so quickly. To meet the timeline required by the Clean Air Act Amendments of 1990, the Agency has modified its internal process for reviewing regulations attendant to the Amendments. The process changes include providing four different types of regulatory review, eliminating a duplicative step in the process of achieving final Agency concurrence on rulemakings, and using the EPA Steering Committee to resolve issues. Early identification and resolution of issues is critical to meet the tight timetables included in the Clean Air Act Amendments of 1990. The new rulemaking processes are described fully in a report to the EPA Deputy Administrator identified in Appendix A.

The Agency has also developed an internal process for coordinating the multiple regulations being developed by its various program offices that affect a given industry sector (e.g., petroleum refineries), contaminant (e.g., lead), environmental resource (e.g., groundwater), or geographic area. This process, referred to as "regulatory clustering," is designed to shift the regulatory development process from producing individual rules in isolation to developing more integrated strategies for addressing environmental problems. The goal is to "cluster" regulations and policies around well-defined environmental problem areas and to develop an integrated strategy for each problem area.

As in the past, review of proposed and final regulations will be conducted by the Office of Management and Budget (OMB) under Executive Order 12291. Given the large number of rulemakings to be reviewed, EPA will make every effort to involve OMB early in the rulemaking cycle by providing briefings and early drafts of rules whenever possible. In addition, OMB officials will be invited to participate in the aforementioned informal discussions throughout the rulemaking cycle.

Figure 2

REGULATORY DEVELOPMENT OVERVIEW





## **6.0 THE REGULATORY AGENDA: THE FIRST TWO YEARS**

The Clean Air Act Amendments of 1990 outline an enormous amount of regulatory activity. Figure 3 indicates the major regulatory activities that will occur over the next two years. As indicated in this figure, EPA's communication activities each month will focus on the major regulatory activities proposed or finalized during that timeframe.

Title-by-title timelines of the requirements of the Clean Air Act Amendments of 1990 are presented in Appendix B. All regulations identified will be proposed and public comments will be solicited. Where a proposal date is not indicated in a timeline contained in Appendix B, the regulation may have been proposed prior to enactment of the Amendments, or a proposal date may not yet have been established by EPA. In developing an implementation strategy, many specific requirements have been grouped into broad work areas. Agency work groups with widespread participation have been formed to address the activities within these broad work areas. To foster the activities of the work groups, planning materials have been prepared for each of the major work areas. Examples of these planning materials are shown in Appendix B following the initial title-specific timelines. These planning charts provide work groups a means of focusing their attention on developing overall programs to implement specific titles. Planning charts have been developed for all major work areas. As work groups address the various work areas, major issues are identified and surfaced for discussion and resolution.

In addition to the timelines presented in Appendix B, a compilation of fact sheets for the regulatory activities that will begin in the first two years is currently being developed by the Agency. This compilation will be available by February 15, 1991.

Planning to implement the Clean Air Act Amendments of 1990 is a dynamic process. The EPA intends to continually review all activities undertaken to implement this law, assess their effectiveness, and make modifications as necessary. This implementation strategy will be updated on an annual basis with each revision focusing on the forthcoming two-year period.





Figure 3

# CLEAN AIR ACT AMENDMENTS OF 1990 IMPLEMENTATION SCHEDULE HIGHLIGHTS: THE FIRST TWO YEARS

Communications Focus	Regulatory Activities	
<i>Getting Started</i>	DEC 1990	Title I - Nonattainment: Issue "Getting Started" Letter to Governors STATES Submit Request/Justification for 5% Classification Adjustments
<i>State &amp; Local Responsibilities</i>	JAN 1991	Publish Two-Year Implementation Strategy Title I - Nonattainment: Publish Notice of Initial PM-10 Moderate Nonattainment Areas Initiate Additional PM-10, SO <sub>2</sub> , Lead Designation Process
<i>Building Consensus</i>	FEB 1991	Title I - Nonattainment: Act on 5% Classification Adjustment Requests
<i>Voluntary Reductions</i>	MAR 1991	Title I - Nonattainment: STATES Submit Nonattainment Area Designations Title III - Air Toxics: Publish Draft Chemical List Petition Procedures Publish 90/95% Early Reduction Guidance Propose List of High Risk Pollutants (Lesser Quantity Cutoffs, 90-95% Early Reduction)
<i>Permit Program</i>	APR 1991	Title I - Nonattainment: STATES Submit PM-10 Areas Unable to Attain by 1994 STATES Respond to List of PM-10, SO <sub>2</sub> , Lead Nonattainment Areas Title III - Air Toxics: Publish Draft List of Source Categories Title V - Permits: Propose State Permit Regulations

## Implementation Strategy for the Clean Air Act Amendments of 1990

Communications Focus	Regulatory Activities
<p><i>Cleaner Cars and Cleaner Fuels</i></p>	<p>MAY 1991</p> <p>Title I - Nonattainment:            STATES' Deadline for Reasonably Available Control            Technology Requirements (Deficiency Corrections)            Notify STATES of Intent to Modify Suggested            Boundaries            Publish Guidance on Stationary Source CO Contributions            Finalize Criteria to Measure Ozone Transport            Title II - Mobile Sources:            Finalize Gasoline Reid Vapor Pressure Regulations            Finalize Tier I Car and Truck Standards            Propose Reformulated Gasoline Requirements            Propose Clean Fuels Fleet and California Pilot Credit            Programs            Propose Urban Bus Regulations            Propose Emission Control Diagnostic Rule            Title III - Air Toxics:            Propose Standards for Large Municipal Waste            Combustors            Publish Final Chemical List Petition Procedures            Title IV - Acid Rain:            Propose Regulations for Auctions and Sales            Title VI - CFCs:            Propose CFC Phase-out Regulations</p>
<p><i>Protecting the Ozone Layer</i></p>	<p>JUNE 1991</p> <p>Title I - Nonattainment:            Propose PM-10 Area Reclassifications            Title VI - CFCs:            Propose Mobile Air Conditioning Recycling Regulations</p>
<p><i>Assisting Small Businesses</i></p>	<p>JULY 1991</p> <p>Title I - Nonattainment:            Propose Revisions to New Source Review Program            Finalize Ozone, CO Nonattainment Boundaries            Finalize List of Additional PM-10 Nonattainment            Areas and SO<sub>2</sub>, Lead Designations            Title V - Permits:            Publish Guidance on State Assistance to Small            Businesses            Title VII - Enforcement:            Propose Administrative Penalties Rules of Practice</p>

Communications Focus	Regulatory Activities	
<i>Attainment of Air Quality Standards</i>	AUG 1991	<p>Title I - Nonattainment:  Propose PM-10 Reasonably Available Control Measures/  Best Available Control Measures Guidance  Issue Transportation Planning Guidance  Publish Title I General Preamble  Publish 1990 Air Quality Data</p> <p>Title II - Mobile Sources:  Publish Marketable Gasoline Oxygen Credit  Guidelines</p> <p>Title VII - Enforcement:  Propose Rules for Citizen Suits</p>
<i>Acid Rain</i>	SEPT 1991	<p>Title IV - Acid Rain:  Propose Emission Trading System  Propose Acid Rain Permit Program  Propose Continuous Emission Monitor Requirements  Propose NOx Requirements for Utility Boilers  Propose Conservation and Renewable Incentives</p> <p>Title VI - CFCs:  Finalize CFC Phase-out Regulations</p>
<i>Business Opportunities in the Clean Air Act</i>	OCT 1991	<p>Title I - Nonattainment:  Publish VOC and CO Emission Inventory Guidance</p> <p>Title II - Mobile Sources:  Finalize Cold Temperature CO Standards  Publish Study on Non-road Engines</p> <p>Title III - Air Toxics:  Propose Maximum Achievable Control Technology for  Coke Ovens</p>

Communications Focus

Regulatory Activities

<p><i>One Year of Progress Toward Cleaner Air</i></p>	<p>NOV 1991</p>	<p>Title I Nonattainment: Propose Tank Vessel Rule Publish Conformity Criteria Publish Guidance on Control Cost-effectiveness STATES Submit PM-10 State Implementation Plans Publish Outer Continental Shelf Rule Publish Guidance on Inspection/Maintenance Programs Publish Guidance on Transportation Control Measures Title II Mobile Sources: Propose Clean Fuel Vehicle Standard Finalize Vehicle Evaporative Emissions Regulations Finalize Onboard Controls Finalize Reformulated Gasoline Requirements Finalize Urban Bus Regulations Finalize Clean Fuels Fleet and California Pilot Credit Program Title III - Air Toxics: Publish Final List of Source Categories Propose Guidance for Modification Provisions Publish Draft Regulatory Schedule for All Source Categories Finalize Standards for Large Municipal Waste Combustors Propose List of Substances for Accidental Releases Prevention Program Propose Maximum Achievable Control Technology for Hazardous Organic Chemical Manufacturing Propose Maximum Achievable Control Technology for Dry Cleaners (per court order) Finalize List of High Risk Pollutants (Lesser Quantity Cutoff, 90%/95% Early Reductions) Title IV - Acid Rain: Finalize Regulations for Auctions and Sales Title V - Permits: Finalize State Permit Regulations Propose Federal Permit Regulations Title VI - CFCs: Ban Nonessential Uses Finalize Mobile Air Conditioning Recycling Regulations Title VII - Enforcement: Propose Rules for Field Citation Program Propose Rules for Contractor Listing</p>
<p><i>Air Toxics</i></p>	<p>DEC 1991</p>	<p>Revise Two-Year Implementation Strategy Title I - Nonattainment: Finalize PM-10 Area Reclassifications Title IV - Acid Rain: Propose List of Phase II Utility Allowances</p>

Communications Focus

Regulatory Activities

Enforcement		
	JAN 1992	Title III - Air Toxics: Propose Standards for Small Municipal Waste Combustors Title VII Enforcement: Finalize Administrative Penalties Rules of Practice
	FEB 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Chromium Electroplating Title VII Enforcement: Propose Monetary Awards Rules
	MAR 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Commercial Sterilizers
	APR 1992	Title III - Air Toxics: Propose Maximum Achievable Control Technology for Asbestos
	MAY 1992	Title I - Nonattainment: Finalize PM-10 Reasonably Available Control Measures/Best Available Control Measures Guidance Finalize Revisions to New Source Review Program Finalize Rules for Ozone, NOx, VOC Enhanced Monitoring Title II - Mobile Sources: Finalize Emission Control Diagnostic Rule Publish Mobile-Source Related Air Toxics Study Title III - Air Toxics: Finalize Guidance for Modification Provisions Title IV - Acid Rain: Finalize Emission Trading System Finalize Continuous Emission Monitor Requirements Finalize NOx Requirements for Utility Boilers Finalize Conservation and Renewable Incentives Finalize Acid Rain Permit Program Title V - Permits: Finalize Federal Permit Program Title VI - CFCs: Finalize CFC and HCFC Labelling Regulations Title VII - Enforcement: Propose Rules for Compliance Certification
	JUNE 1992	
	JULY 1992	

Communications Focus

Regulatory Activities

	AUG 1992	Title I - Nonattainment: Publish 1991 Air Quality Data Title VII - Enforcement: Finalize Guidance/Rules for Citizen Suits
	SEPT 1992	
	OCT 1992	Title III - Air Toxics: Finalize Maximum Achievable Control Technology for Coke Ovens
<i>Meeting the Deadlines in the Clean Air Act</i>	NOV 1992	Title I - Nonattainment: Finalize Tank Vessel Rule Finalize Rules for Economic Incentives Program Propose First Set of NSPS Rules STATES Submit RACT Catch-up Rules, NSR Rules, CO Attainment Demonstration, and Contingency Measures STATES Submit Base Year Ozone/CO Emission Inventories Title II - Mobile Sources: Finalize Clean-Fuel Vehicle Standards Determine Significance of Non-road Engine Emissions Title III - Air Toxics: Finalize Maximum Achievable Control Technology for Dry Cleaners (per court order) Finalize Maximum Achievable Control Technology for Hazardous Organic Chemical Manufacturing Finalize Regulatory Schedule for All Source Categories Finalize List of Substances for Accidental Releases Prevention Program Title VI - CFCs: Finalize Safe Alternatives Program Title VII - Enforcement: Finalize Guidance/Rules for Field Citation Program Finalize Guidance/Rules for Contractor Listing Finalize Rules for Monetary Awards
	DEC 1992	Title III - Air Toxics: Finalize Standards for Small Municipal Waste Combustors Title IV - Acid Rain: Finalize List of Phase II Utility Allowances

In the subsections to follow, regulatory highlights and major issues that EPA will focus on over the next two years are presented for each title. Additional information on the statutory requirements have been summarized in several documents developed by EPA as listed in Appendix A. For more information, a Headquarters or Regional EPA office may be contacted (see Appendix C).

## **6.1 Title I - Nonattainment**

Title I includes provisions for attaining and maintaining the national ambient air quality standards (NAAQS). The NAAQS are set to protect public health and welfare and have been established for six criteria pollutants (ozone, carbon monoxide, particulate matter, lead, sulfur dioxide, and nitrogen dioxide). Although significant improvements in air quality have occurred since the Agency was created twenty years ago, millions of people still live in urban areas which do not meet the NAAQS. This results in adverse human health effects such as respiratory illness and premature mortality, and in adverse environmental effects such as impairment of visibility, reduction in crop yields, and forest damage. A summary of the actions required by the title between now and the year 2010 is presented in Figure B-1 found in Appendix B.

The various actions required under Title I have been grouped into several major work areas, as follows:

- o Designation and classification of areas;
- o State implementation plan (SIP) control strategy development;
- o Emission inventory and modeling;
- o SIP procedures and permits;
- o Federal measures;
- o Tracking progress/sanctions and federal implementation plans;
- o Ozone Transport Commission; and
- o Special studies.

Two of these work areas have been selected to illustrate EPA's planning efforts for Title I: designation and classification of areas and SIP control strategy development.

The Clean Air Act Amendments of 1990 clarify how areas will be designated as nonattainment and specify procedures to define the boundaries of these areas. Figure B-2, found in Appendix B, presents an example of the planning materials developed for the designation/classification process. The various regulatory activities required by the



Clean Air Act Amendments of 1990 have been identified *below* the timeline. Activities needed to make the required regulatory activity happen are identified *above* the timeline.

Nonattainment areas are classified for ozone, carbon monoxide, and particulate matter in accordance with the severity of the air pollution problem. (See Table B-1 in Appendix B.) Depending upon the degree to which an area exceeds the standard, that area will be required to implement various control programs and achieve attainment of the NAAQS within a specified timeframe. For example, Figures B-3 and B-4 in Appendix B identify the state implementation plan (SIP) requirements for the various ozone and carbon monoxide nonattainment areas, respectively.

The Amendments allow some discretion in the classification of areas (5 percent adjustment criteria) and the setting of geographical boundaries for the nonattainment area. In applying this discretion, EPA must address several issues, including:

- o How can consistency be ensured in boundary determinations across the country and for different pollutants?
- o Should these boundaries conform to recognized political/administrative boundaries?
- o What criteria will be used to approve or disapprove requests to change area classifications?

Figure B-5 in Appendix B presents activities over the next several years related to ozone and carbon monoxide SIPs. An important early deadline for state air pollution control agencies is six months after enactment - May 15, 1991. At this time, all states with ozone nonattainment areas designated before November 15, 1990, must revise their SIPs to reflect required stationary and mobile sources and submit them to EPA. Stationary source control measures required are the reasonably available control technology (RACT) "fix-ups".

Mobile source control measures include vehicle inspection and maintenance (I/M) programs to reduce carbon monoxide and precursors to ozone. Under the new law, I/M programs will be required in approximately 110 nonattainment areas. Forty of these areas do not presently have an I/M program. Basic I/M programs will be required in all moderate ozone nonattainment areas and enhanced I/M programs will be required in serious, severe, and extreme nonattainment areas. Enhanced I/M programs will be

required to achieve emissions reductions greater than the current, or basic, programs. One of the most common ways to enhance a program is, in addition to the usual tailpipe emissions test, to check whether emissions control components have been tampered with or removed.

Annual inspections and centralized programs are required by the Clean Air Act Amendments of 1990 unless a state can demonstrate that biennial or decentralized programs are equally or more effective. The EPA is required to review, revise, and republish Federal guidance on I/M programs within 12 months of enactment. The Agency currently anticipates publishing this guidance earlier than required in order to provide state agencies more time to obtain additional legislative authority, if needed.

Major near-term issues that surface with respect to the required SIP revisions include:

- o How can those states which earlier failed to effectively implement similar requirements, be encouraged, within the short timeframe allowed, to adopt major SIP revisions?
- o How should EPA effectively deal with an area which fails to meet the required deadline?

Several issues will need to be resolved by EPA with respect to I/M programs, including:

- o Can decentralized programs be established so that they are as effective as centralized programs?
- o What is the best mechanism to implement the "on-road testing" required by the Amendments?
- o Can biennial inspection programs be established so that they are as effective as annual programs?

## **6.2 Title II - Mobile Sources**

Title II of the Clean Air Act Amendments of 1990 contains provisions relating to the control of mobile source emissions. Cars and trucks currently account for approximately 50% of the ozone precursors (volatile organic compounds and nitrogen

oxides) and up to 90% of the carbon monoxide emissions in urban areas. The principal reason for this problem is the rapid growth in the number of vehicles on the roadways and the total miles driven. This growth has offset a large portion of the emission reductions gained from motor vehicle controls in effect to date.

Figure B-6 in Appendix B illustrates the deadlines for the mobile source requirements identified in the Clean Air Act Amendments of 1990. Specific areas that will be addressed in the first few years by EPA include: more stringent tailpipe standards, reformulated gasoline, an oxygenated fuels program for carbon monoxide nonattainment areas, a California clean car pilot program, and a clean fuels program for vehicle fleets in 22 of the worst air pollution areas.

Passenger car standards have not changed since 1981, though control technology and reliability have advanced dramatically. Therefore, the new law establishes tighter tailpipe emissions standards for hydrocarbons, carbon monoxide, and nitrogen oxides. The Tier I standards are to be phased-in beginning with vehicles produced in model year 1994. By the end of 1999, the Agency will determine the need, cost, and feasibility of additional Tier II standards for vehicles produced in model year 2004 and later. The new law also extends the useful life requirements for passenger cars from 5 years/50,000 miles to 10 years/100,000 miles. In addition, for the first time, EPA will establish a tailpipe standard for carbon monoxide under cold temperature conditions.

Vehicle emissions resulting from gasoline evaporation during refueling will be controlled. The EPA must also issue regulations to improve the systems which control evaporative emissions when vehicles are in operation or parked.

New programs requiring cleaner (reformulated) gasoline will be initiated in nine U.S. cities beginning in 1995. These cities are those with the worst ozone problems. Additional ozone nonattainment areas may elect to "opt-in" to this reformulated fuels program. Within one year of enactment, the Agency must promulgate regulations for reformulated gasoline to be used in gasoline-fueled vehicles. These regulations must require the greatest reduction in emissions of volatile organic compounds and toxic air pollutants achievable considering costs, any air- or nonair-quality related health and environmental impacts, and energy requirements.

The major issues to be addressed for reformulated gasoline include:

- o How can an accurate baseline fuel best be established?

- o How can an adequate supply and distribution infrastructure for the reformulated gasoline best be assured?

Fuel quality will also be controlled in 41 carbon monoxide nonattainment areas during the winter months. This program is scheduled to begin November 1, 1992 and will require fuel with a 2.7% oxygen content. However, EPA may delay the start of the program by two years if the domestic supply and distribution capacity is insufficient. The oxygenated fuels are to be sold for a minimum of four months of the year unless EPA reduces the timeframe in response to a state request. Such a request must demonstrate that, because of meteorological conditions, a reduced period will assure that there will be no exceedences of the carbon monoxide standard outside of the reduced period. A key issue to be addressed by the Agency in implementing this program will be the establishment of the criteria EPA will use to modify the effective months of the oxygenated fuels program.

Two clean fuel programs are identified in the Clean Air Act Amendments of 1990. "Clean fuels" include: compressed natural gas, ethanol, methanol, liquified petroleum gas, electricity, reformulated gasoline, and possibly other fuels. The first program is a California Clean Car pilot program. Requirements for this program will be established by rule within two years of enactment. The law establishes emission standards and allows the auto and fuel industries to determine whether to meet the standards by vehicle controls, new fuels, or a combination of both technologies. The program will be phased in beginning in 1996 with 150,000 cars and light duty trucks. By 1999, the program will expand to cover 300,000 cars per year. More stringent standards (Phase II) will begin in 2001. States with serious, severe, or extreme ozone nonattainment areas may elect to "opt-in" to the California program.

The second clean fuels program requires 22 areas having the worst air quality to limit the mobile source emissions from centrally-fueled fleets of 10 or more. This program will be phased-in beginning in 1998 unless the vehicles meeting these standards are not being sold in California, in which case, the program will be delayed until 2001. The EPA is to develop regulations on the general fleet program and credits program by November 15, 1991. Through the credit program, credits may be issued for: (1) the purchase of more clean-fuel vehicles than required; (2) the purchase of clean fuel vehicles which meet more stringent standards; and (3) the purchase of vehicles in additional vehicle categories. Within 24 months of enactment, the Agency will issue regulations with respect to converting conventional vehicles to clean fuel vehicles.

Section 177 of the Amendments allows states to adopt California's more stringent tailpipe standards for cars sold within their boundaries. This option, currently being considered by a number of states, may raise production and distribution problems for the auto industry, as well as potential enforcement and compliance monitoring problems for EPA and the states.

### **6.3 Title III - Hazardous Air Pollutants**

According to industry estimates, more than 2.4 billion pounds of toxic pollutants were emitted into the atmosphere in 1988. These emissions may result in a variety of adverse health effects including cancer, reproductive effects, birth defects, and respiratory illness. Only seven hazardous air pollutants were regulated under the previous Clean Air Act.

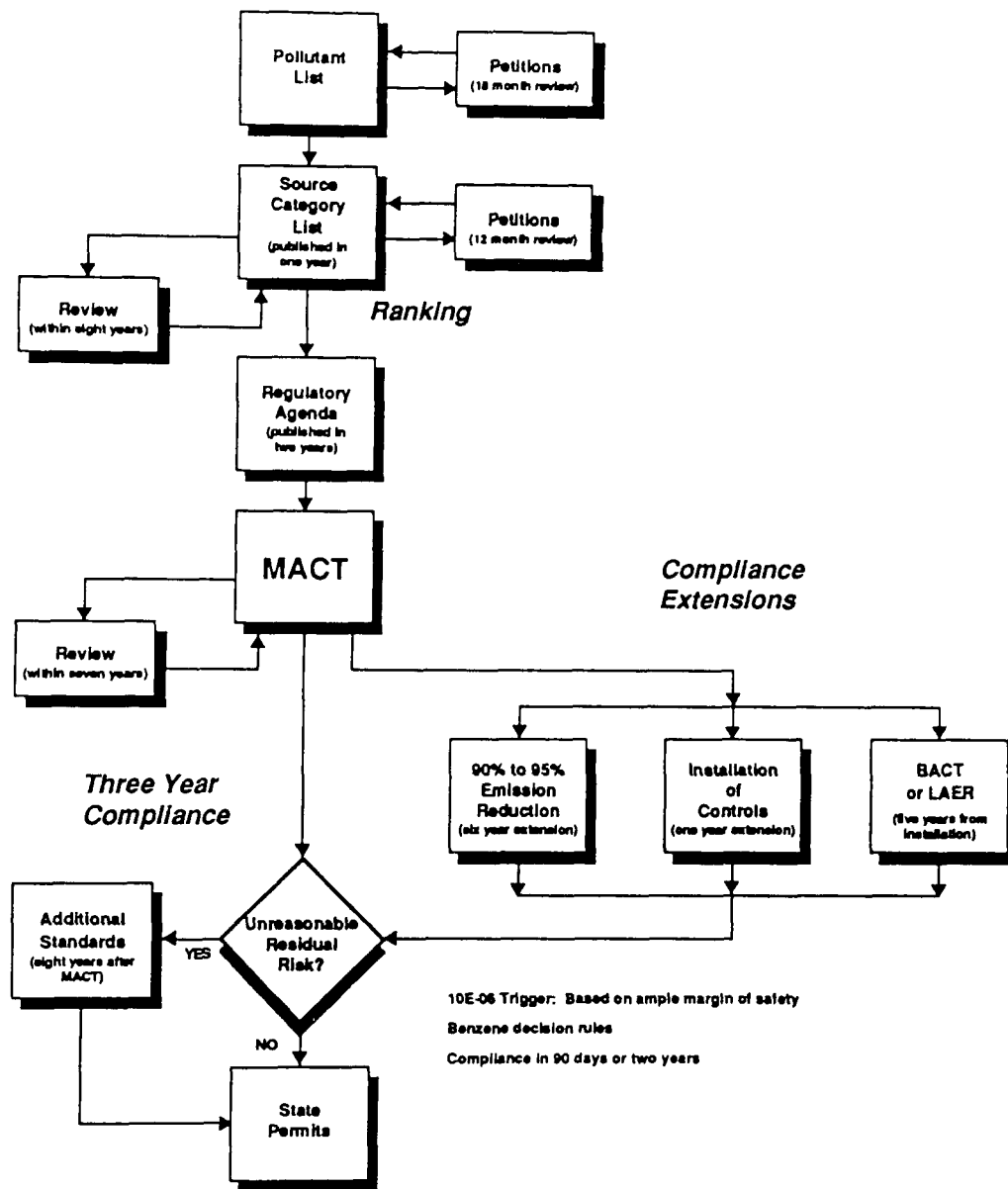
Title III of the Clean Air Act Amendments of 1990 provides new tools for controlling emissions of these pollutants. The title addresses not only routine but also accidental releases of hazardous air pollutants. An overview of its basic requirement is found in Figure B-7 in Appendix B. Emissions both from large and small facilities that contribute to air toxics problems in urban areas will be addressed. As illustrated in Figure 4, the new law restructures the process for developing hazardous air pollutant emission standards for routine releases from stationary sources. For planning purposes, implementation of this title over the next several years has been divided into seven major work areas:

- o Section 112 - Implementation and Guidance;
- o Maximum Achievable Control Technology (MACT)/Generally Available Control Technologies (GACT) (2-year standards);
- o MACT/GACT (4-year standards) ;
- o Air Toxics Studies;
- o Section 129 - Solid Waste Incineration;
- o State Enabling Activities; and
- o Accidental Releases and Chemical Safety Board.

Planning materials to assist in structuring the work under Title III have been prepared. Figure B-7 in Appendix B presents, over a five-year horizon, an example of the planning materials developed for the two-year MACT/GACT standards. The various regulatory activities required by the Clean Air Act Amendments of 1990 have

Figure 4

TITLE III: AIR TOXICS



been identified *below* the timeline. Activities needed to make the required regulatory activity happen are identified *above* the timeline.

The statute establishes an initial list of 189 hazardous air pollutants. Petitions to add or delete pollutants from this list may be submitted to the Agency beginning May 15, 1991. Using this list of pollutants, the Agency will publish, within one year of enactment, a list of the source categories (major and area sources) for which emission standards will be developed. Within two years of enactment, it will publish a schedule establishing a date for the promulgation of these standards. Petitions may also be submitted to the Agency to remove source categories.

For each listed source category, EPA will issue standards requiring the maximum degree of emissions reduction that has been demonstrated to be achievable. These are commonly referred to as maximum achievable control technology (MACT) standards. The primary consideration in establishing these standards must be demonstrated technology. Other considerations which may play some role in standard selection include: costs, non-air quality health and environmental impacts, and energy requirements. For area sources, EPA may elect to promulgate standards which provide for the use of generally available control technologies or management practices (GACT). As indicated in Figure 3, the first MACT/GACT standards will be proposed for coke ovens in October 1991 and for chemical manufacturing and dry cleaners in November, 1991.

Efforts to achieve early environmental benefits are encouraged in Title III. For example, industries will be encouraged to use the provisions which allow an alternative compliance date in exchange for the implementation of an early emission reduction program. Effective use of these provisions will allow industry flexibility in achieving emission reductions and will result in early environmental benefits. As indicated in Figure 3, EPA plans to issue guidance for sources interested in exercising this option in the Spring of 1991. In addition, other compliance extensions may be granted as indicated in Figure 4.

The standards developed under Title III to control hazardous air pollutants will be enforced under the operating permit program required under Title V. Several issues associated with developing emission standards include:

- o What is the definition of "source" as it applies to the various provisions of Title III?

- o What factors should be considered in differentiating between different types and classes of sources in setting MACT/GACT standards?
- o When should GACT versus MACT be used for area sources?
- o How should guidance be developed on how to use the early emission reduction provisions effectively in order to secure early emission reductions in air toxic emissions?
- o How "high" or "low" should the hurdle be for granting petitions to add or delete pollutants from the list of hazardous air pollutants or to remove a listed source category?

Title III contains provisions for EPA to perform studies on a variety of air toxics problems such as deposition of toxic air pollutants into the Great Lakes, urban air toxics concentrations, and the emissions of toxic air pollutants from electric utilities. Within the first two years, EPA will establish an air toxics monitoring network around the Great Lakes.

Section 129 of Title III includes provisions for a comprehensive regulatory program for solid waste incinerators. In January 1991, the Agency promulgated standards for large capacity (> 250 tons per day) municipal waste combustors (MWCs) for most pollutants. Regulations for lead, mercury, and cadmium emissions from these MWCs will be promulgated by November 1991. Standards for small capacity (< 250 tons per day) MWCs will be promulgated by November 1992. The EPA efforts will also emphasize the development of regulations for medical waste incinerators, commercial/industrial waste incinerators, and all other waste incinerators.

Title III also includes provisions to prevent accidental releases of hazardous air pollutants. Implementation of the accidental release provisions will be the responsibility of EPA's Chemical Emergency Preparedness and Prevention Office within the Office of Solid Waste and Emergency Response. Within two years, the Agency will promulgate a list of at least 100 chemicals which, if accidentally released, can seriously damage human health or the environment. Threshold quantities will be established for these pollutants taking into consideration toxicity, reactivity, volatility, dispersibility, combustibility, or flammability. Based upon regulations finalized within three years of enactment, any facility at which a listed pollutant is present at greater than a threshold quantity will be



required to prepare and implement a risk management plan. The plan must address how the facility will detect and prevent, or minimize, accidental releases.

Title III also creates the Chemical Safety and Hazard Investigation Board, an independent safety board. The board will be responsible for investigating any accidental release that results in a fatality or substantial property damage. It will also report regularly to Congress and make recommendations to EPA and the Department of Labor related to the preparation for, or prevention of, accidental releases.

Several major issues related to chemical accident prevention include:

- o How best can overlapping issues be coordinated with the Department of Labor?
- o What is the best way to interface the requirements of Title III of the Clean Air Act Amendments of 1990 with related provisions contained in Title III of the Emergency Planning and Community Right-to-Know Act?

#### **6.4 Title IV - Acid Deposition Control**

Title IV of the Clean Air Act Amendments of 1990 addresses the control of the pollutants associated with acid rain. The goal of this title of the Amendments is to achieve a 10 million ton reduction of sulfur dioxide (SO<sub>2</sub>) and an approximately 2 million ton reduction in nitrogen oxides (NO<sub>x</sub>), relative to 1980 levels. The focus of the acid rain program is an innovative market-based emission allowance program which will provide affected sources flexibility in meeting the mandated emission reductions. The acid rain allowance trading program will be the first large-scale regulatory use of market incentives, and is already being seen as a model for regulatory reform efforts here and abroad. Figure B-9 in Appendix B illustrates the statutory requirements of this title. Figure B-10 presents a timeline for activities related to the SO<sub>2</sub> allowance and trading provisions.

The EPA will allocate SO<sub>2</sub> allowances to utilities in two phases:

- o Phase I: Beginning in 1995, large, high-emitting coal-fired utility units will be affected.

- o Phase II: Beginning in 2000, an additional 2000 utility units with an output capacity of greater than or equal to 25 megawatts are included.
- o Both phases require facilities to install continuous emission monitoring systems to track progress and assure compliance. Figure B-11 in Appendix B identifies the regulatory events associated with emissions monitoring.

The new law allows utilities to trade allowances within their systems and/or buy or sell allowances to and from other affected sources. Each source must have sufficient allowances to cover its annual emissions; if it does not, it becomes subject to excess emissions fees and must offset the excess emissions in the following year. The EPA will promulgate regulations for the allowance system within 18 months of enactment. The Agency will take all available steps to facilitate active trading of allowances. This will serve to minimize compliance costs, maximize economic efficiency, and allow for growth. In addition, the allowance trading system incorporates an incentive for energy conservation and technology innovation, both of which can lower the cost of compliance and yield pollution prevention benefits.

When effectively implemented, Title IV of the Clean Air Act Amendments of 1990 will achieve a reduction in NO<sub>x</sub> of approximately 2 million tons. Specifically, the statute requires EPA to establish stringent new NO<sub>x</sub> emissions rates for various types of utility boilers. The rates are to be set at a level expected to be achievable through the use of low NO<sub>x</sub> burner technology and will be phased-in. Figure B-12 presents the major activities and timing associated with the NO<sub>x</sub> provisions.

Key issues associated with implementing Title IV include:

- o What is the most effective way to use allowance trading and tracking procedures, as well as emissions monitoring, to achieve the economic, technological innovation, and energy efficiency benefits of the program?
- o How best can permitting procedures and emissions monitoring provisions be established to ensure accountability and confidence that emissions reductions are occurring on time?

## **6.5 Title V - Permits**

The Clean Air Act Amendments of 1990 establish a comprehensive operating permit program for air emissions. It is modelled after a similar program established

under the Federal National Pollution Elimination Discharge System (NPDES), and brings air pollution legislation in line with other environmental statutes (e.g., the Clean Water Act).

The purpose of the operating program is to put in one place all of the requirements concerning air emissions that apply to affected sources. When fully in place, these permits will ensure that sources are not being subjected to conflicting requirements and that all parties have a clear picture of those requirements.

The permit program contained in Title V provides the building block for implementing major portions of the Clean Air Act Amendments of 1990. Figure 5 provides an illustration of the links between the permit program, several titles of the new legislation, and ongoing air pollution control programs. Implementing the permit program must entail close coordination with all of these programs.

Figure B-13 presents a timeline for Title V regulatory activities (see Appendix B). Major work group areas through which EPA plans to implement these activities include:

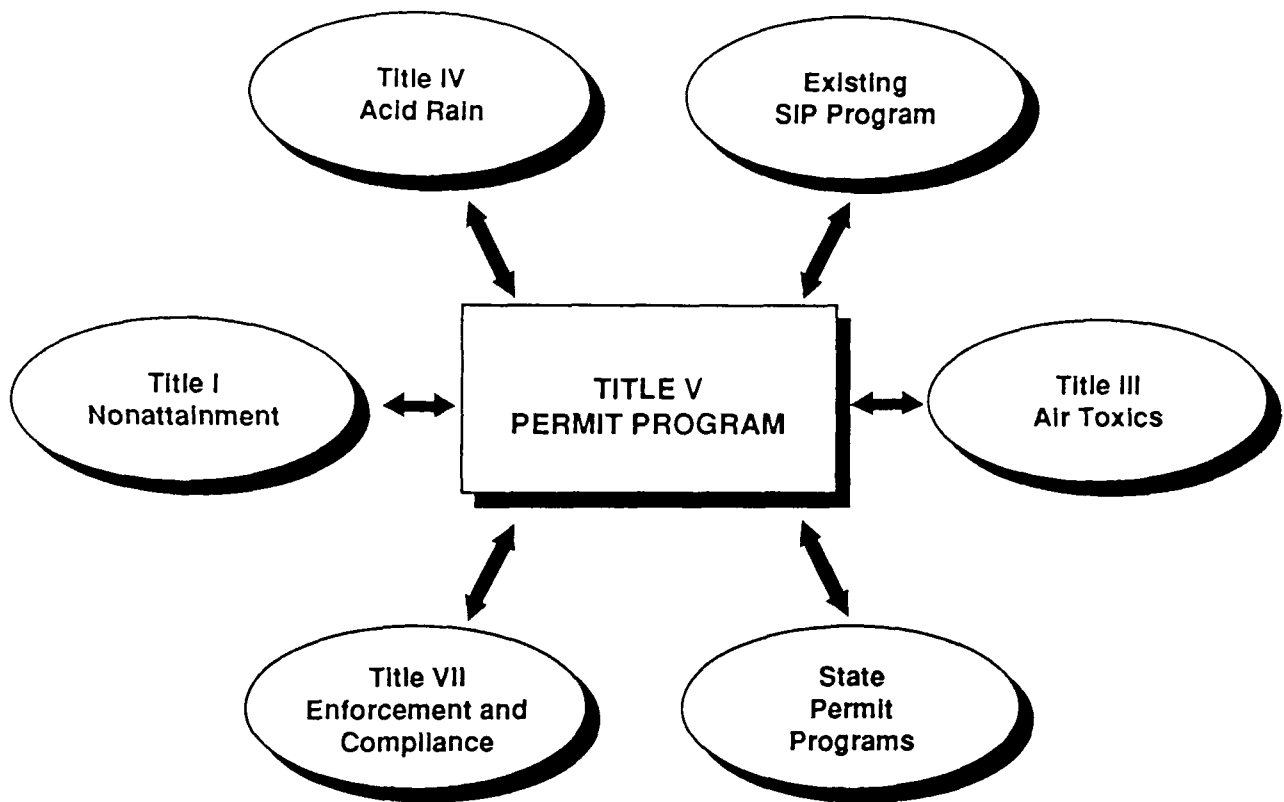
- o Permit Regulation Development
- o Permit Program Start-Up
- o Permit Program Oversight
- o Permit Program Implementation Support

Planning material for carrying out these major work areas are contained in Appendix B, Figures B-14, B-15, B-16, and B-17.

The permit program is one of the most important procedural reforms contained in the new law. The EPA will develop program regulations within one year following enactment defining the minimum elements required in a state operating permit program. State agencies have three years from enactment to submit a permit program to EPA for approval. The EPA has one year to approve or disapprove a program. The operating permit program will enable states to collect permit fees from the affected sources to cover reasonable direct and indirect operating costs for the permit program. A permit is to be issued for a fixed term, not to exceed five years. Though administration will be conducted by states with approved programs, EPA will still assume federal oversight responsibilities and all permits will be subject to public comment.

Figure 5

TITLE V: OPERATING PERMITS



Title V also includes a provision requiring states to establish, as part of the SIP, a small business stationary source technical and environmental compliance assistance program. The program must be in place by November 1992. Within nine months of enactment (August 1991), EPA will: (1) establish a program to assist states in developing these small business assistance programs; (2) issue guidance for the states to use during implementation of the programs, including guidance on alternative control technologies and pollution prevention methods for small stationary sources; and (3) provide for the implementation of the program if a state fails to submit a program. The EPA Small Business Ombudsman will monitor the program and report to Congress on its effectiveness.

Some of the major issues which must be addressed in implementing Title V include:

- o Program Scope - What sources should be considered and when?
- o Program Startup - How can EPA effectively encourage early development and approval of state programs?
- o Operational Flexibility - What is the best way to ensure that the requirements to issue operating permits do not unduly interfere with the day-to-day operations of a source?
- o SIP/Permit Program - How can EPA best ensure that permits will not erode SIP demonstrations and that SIPs will not gridlock the permit process?
- o EPA Oversight - What is the most effective mechanism for EPA to provide adequate oversight of permit programs managed by state agencies?

## **6.6 Title VI - Stratospheric Ozone Protection**

In Title VI, the Clean Air Act Amendments of 1990 essentially codify and expand upon the Revised Montreal Protocol that was negotiated by the United States to address the depletion of the stratospheric ozone layer. Figure B-18 in Appendix B presents the statutory requirements of this title. The law requires a complete phase-out of chlorofluorocarbons (CFCs) and halons with interim reductions. Ozone-depleting

substances will be grouped into two classes. Class I chemicals (CFCs, halons, and carbon tetrachloride, and methyl chloroform) will be phased out by 2000, with the exception of a methyl chloroform phaseout by 2002. Class II chemicals (hydrochlorofluorocarbons (HCFCs)) will be phased out by 2030.

Regulations are required to reduce the use and emissions of Class I and Class II substances to the "lowest achievable level" and to maximize the recapture and recycling of these chemicals. The EPA will develop a regulation for the use and disposal of Class I chemicals during the service, repair, or disposal of appliances and industrial process refrigeration. This rule is scheduled to be promulgated by January 1, 1992 and to become effective on July 1, 1992. A subsequent rule promulgated by November 15, 1994 will establish standards and requirements regarding all other uses and disposal of Class I and II chemicals. In addition, the Clean Air Act Amendments of 1990 require EPA to establish standards by November 15, 1991 for the recapture and recycling of refrigerant during the service of motor vehicle air conditioners (MACs). By November 15, 1992, the Agency will promulgate rules with respect to safe alternatives for Class I and II chemicals. At this time, EPA will also publish a list of the substitutes prohibited for specific uses and the safe alternatives identified for specific uses. Of key importance in this program is the need to evaluate each alternative based on its overall impact on the environment. The EPA will attempt to select alternatives that will maximize benefits, minimize costs, avoid double chemical shifts, ensure safety, and enhance energy efficiency.

Critical issues that must be assessed include:

- o How may HCFCs be used to lower chlorine levels?
- o How may the energy efficiency of substitutes be improved?
- o How can disruptions to key user sectors be minimized?
- o How can the global warming potential of substitutes be minimized?

In addition, EPA will develop labeling regulations for products made with or containing Class I and Class II chemicals. The Agency is also required to promulgate a ban on nonessential products containing Class I chemicals by November 15, 1991.

Title VI also requires EPA to prepare several reports on methane emissions, technologies available to control these emissions, and the cost-effectiveness of various control options.

## **6.7 Title VII - Enforcement**

The EPA is committed to strong enforcement, and the Clean Air Act Amendments of 1990 expand and enhance the tools available to the Agency. The new law incorporates enforcement features of other recent environmental statutes, including felony penalties for knowing violations of the Act and misdemeanor penalties for negligent releases of hazardous pollutants. Figure B-19 in Appendix B presents a timeline illustrating the statutory deadlines included in Title VII. Figures B-20, B-21, and B-22 in Appendix B illustrate additional enforcement activities required by the statute.

Under Title VII, EPA will have more administrative enforcement procedures available to enable the Agency to respond more quickly to violations. The EPA will be able to issue administrative enforcement penalties orders of up to \$200,000, and to issue administrative orders with compliance schedules of up to 12 months. Additionally, EPA has the authority to establish, through regulation, a field citation program for minor violations. These field citations for minor violations may be issued on site during an inspection, for up to \$5,000 per day of violation. Development of the field citation program will involve identifying violation types suited for field enforcement and establishing the appropriate penalty levels.

The EPA also has expanded authority in the contractor list program. For example, the authority which excludes Clean Air Act violators from Federal government contracts, grants, and loans has been expanded to apply to any facility owned or operated by the violator. This could have broad implications for violating companies, as well as for other Federal agencies which use those companies.

The Clean Air Act Amendments of 1990 have strengthened EPA's authority to obtain reliable compliance data from the regulated industries. Titles V and VII of the statute provide for certifications of compliance from sources, and give explicit authority to EPA to develop regulations which require enhanced monitoring of stationary sources. The EPA will need to define appropriate source categories to target for this enhanced monitoring program, as well as appropriate monitoring methods. These requirements, as implemented in part through the operating permit program, will facilitate compliance

determinations, and give a more accurate picture of the compliance status of the regulated community.

Finally, the Amendments significantly expand a citizen's authority to enforce Clean Air Act requirements. Citizen suits may now include the assessment of civil penalties, and EPA will be provided with sufficient notice to intervene in these suits. A fund will be established from the ensuing penalties which EPA can use for air compliance and enforcement activities. Hence, the Agency will need to establish guidelines on the appropriate use of this fund. Further, the Clean Air Act Amendments of 1990 provide for monetary awards of up to \$10,000 to citizens who provide information leading to a criminal conviction or a civil penalty.

Major issues associated with Title VII include:

- o How should criteria for categorizing violations and setting penalties be defined?
- o What will be the scope of the field citation program?
- o What should the criteria be for enhanced monitoring requirements and over what timeframe will they be implemented?
- o What will be the criteria for utilizing monies gained from citizen suits?

## **6.8 Title VIII - Miscellaneous**

Title VIII of the Clean Air Act Amendments of 1990 includes various miscellaneous provisions. Figure B-23 in Appendix B illustrates the requirements of this title. Two key provisions address visibility and emissions from sources on the Outer Continental Shelf. The visibility provision requires EPA to: (1) conduct research to identify and evaluate those sources and source regions that either impair visibility or provide predominantly clean air for Class I areas; and (2) assess the impacts of the implementation of provisions of the Clean Air Act Amendments of 1990 as to the progress and improvement of visibility in Class I areas. A visibility transport region may be established when the Agency determines that current or projected interstate transport of air pollutants from one or more states contributes significantly to visibility impairment in Class I areas located in the affected states. A Grand Canyon Visibility Transport Commission must be established by November 15, 1991.



The Outer Continental Shelf provisions require EPA to promulgate regulations to control air pollution for sources located offshore of the states along the Pacific, Atlantic, and Arctic coasts as well as sources offshore of Florida on the United States Gulf Coast.

Title VIII also includes provisions related to several studies and reports. Examples include a study of renewable energy and energy conservation incentives, a study and test program on the development of a hydrogen fuel cell electric vehicle, and an analysis of costs and benefits. For many of these efforts, EPA will consult with other federal agencies. This title also establishes a program to monitor and improve air quality in regions along the U.S./Mexico border.

## **6.9 Title IX - Clean Air Research**

Title IX of the Clean Air Act Amendments of 1990 addresses air pollution research areas including monitoring and modelling, health effects, ecological effects, accidental releases, pollution prevention and emissions control, acid rain, and alternative motor vehicle fuels. Figure B-24 in Appendix B presents the statutory requirements of Title IX. The provisions require ecosystem studies on the effects of air pollutants on water quality, forests, biological diversity and other terrestrial and aquatic systems exposed to air pollutants; call for the continuation of National Acid Precipitation Assessment Program (NAPAP); mandate the development of technologies and strategies for air pollution prevention from stationary and area sources; and call for several major studies. The EPA must improve methods and techniques for measuring individual air pollutants and complex mixtures, and conduct research on long- and short-term health effects, including the requirement for a new interagency task force to coordinate these research programs. Finally, the Agency must develop improved monitoring and modeling methods to increase the understanding of tropospheric ozone formation and control.

To implement the research provisions, the EPA plans to conduct research in emissions inventories, atmospheric modeling, source/ambient monitoring, control technologies, health, and ecological monitoring. Both ecological and ambient monitoring will be done jointly with other agencies who also need these data to meet their mission. Other proposed work includes developing improved risk assessment methods, maintaining existing networks or establishing new ones for aquatic and terrestrial effects monitoring, and continuing work on deposition chemistry as required for the NAPAP confirmation. Again, these efforts in particular will be supported, in part, by other agencies.

## **6.10 Other Titles**

Title X addresses disadvantaged business concerns, and Title XI contains provisions to provide additional unemployment benefits to workers laid off because of compliance with the Clean Air Act through the Job Training Partnership Act. Figure B-25 in Appendix B presents the requirements of Title XI.

## **APPENDIX A**

### **ADDITIONAL INFORMATION SOURCES**

## APPENDIX A

### ADDITIONAL INFORMATION SOURCES FOR THE CLEAN AIR ACT AMENDMENTS OF 1990

To obtain a copy of any of the references mentioned below, please circle the item number and complete the following information:

NAME: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

#### General References Available

1. The Clean Air Act Amendments of 1990: Summary Materials. U.S. EPA, November 15, 1990. (20 pages; includes glossary, one page title summaries, legislative chronology)
2. Clean Air Act Amendments of 1990: Detailed Summary of Titles. U.S. EPA, November 30, 1990. (approximately 150 pages; includes a detailed summary for all titles)
3. Report to the Deputy Administrator: Clean Air Act Implementation Task Force (July 1990)

#### Enforcement

4. Impact of Title VII on EPA Enforcement (10/26/90).
5. Provisions Related to Enforcement (11/8/90).
6. Immediately Effective Provisions of Title VII (12/12/90).

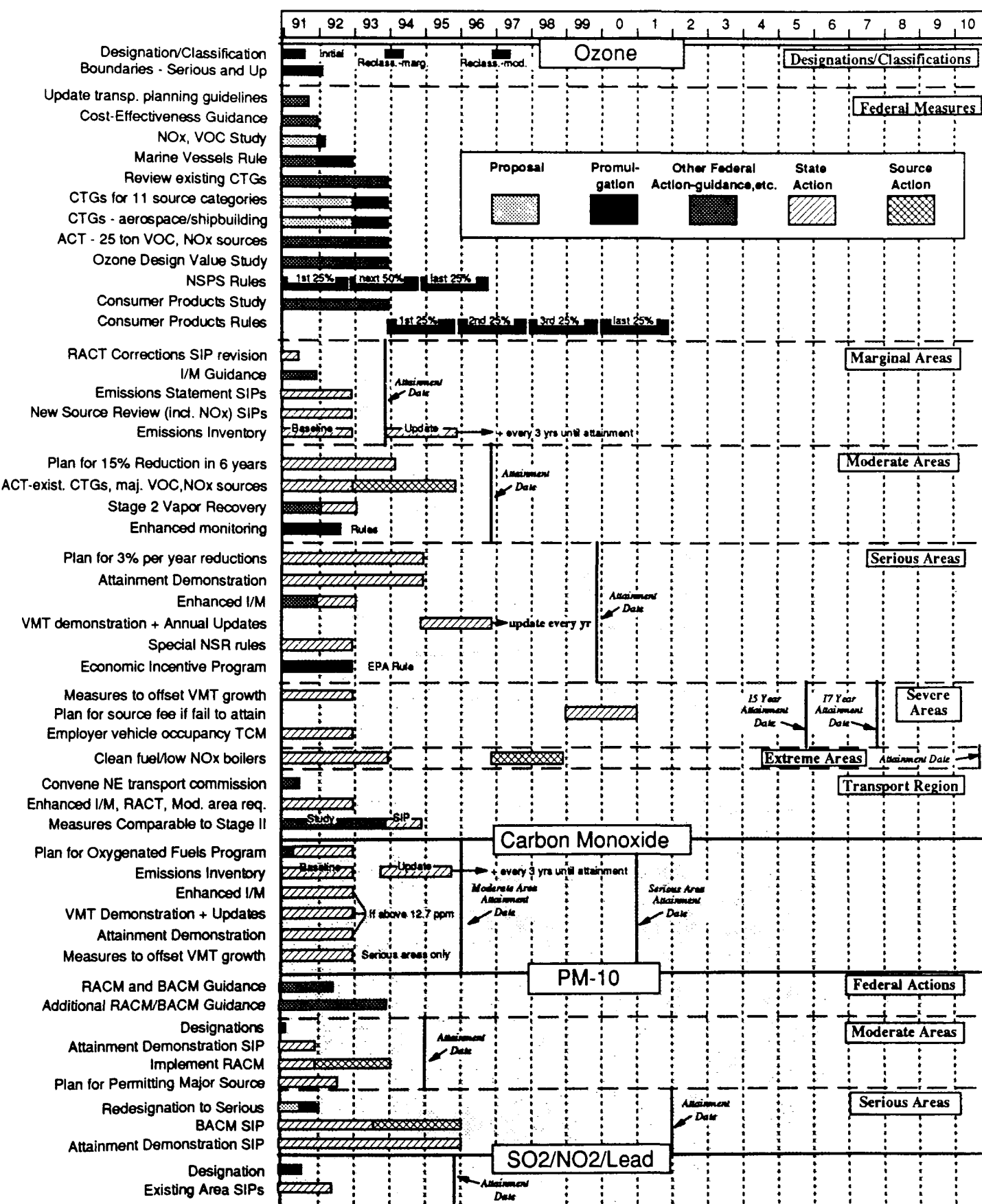
To receive copies of these documents, please send this form to:

U.S. EPA - Office of Air and Radiation  
ANR - 443  
401 M. Street, S.W.  
Washington, D.C. 20460

## **APPENDIX B**

### **TITLE-BY-TITLE STATUTORY REQUIREMENTS**

# Title I - Nonattainment



# TITLE I OZONE/CO DESIGNATION AND CLASSIFICATION

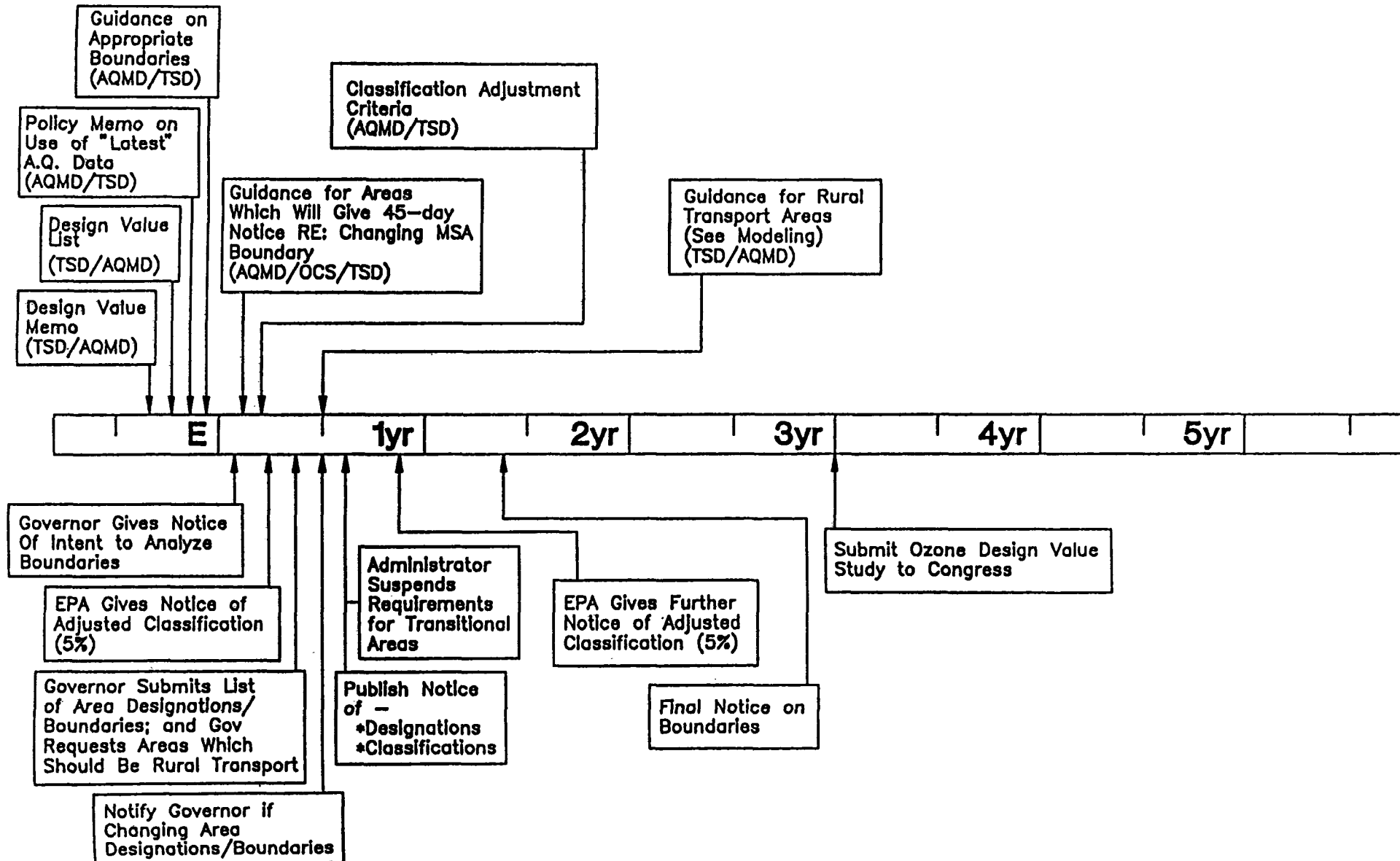


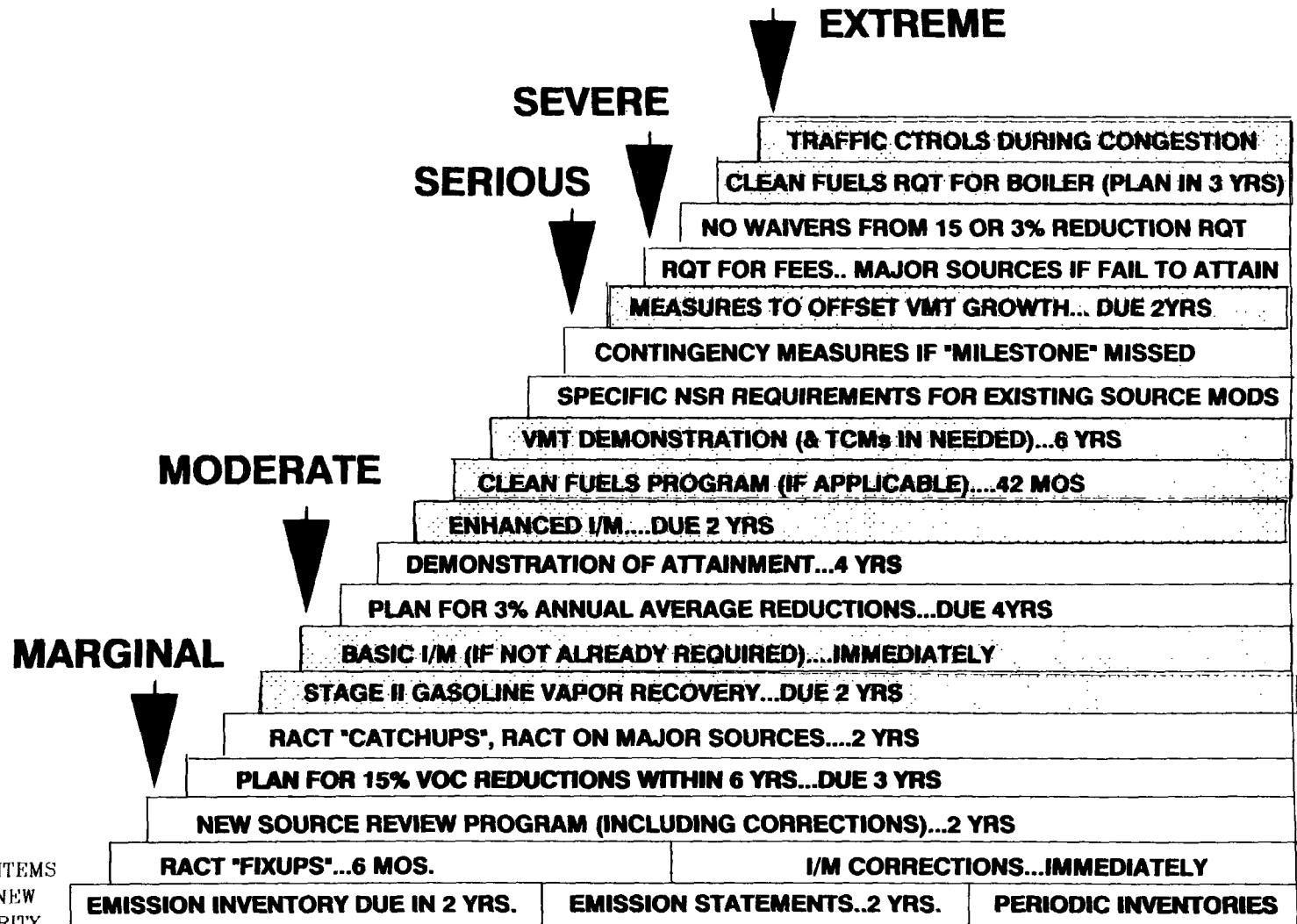


Table B-1

## CLASSIFICATION OF AREAS

	CLASS	LEVEL - PPM	ATTAINMENT DATE
Ozone	Marginal	.121 to .138	3 years
	Moderate	.138 to .160	6 years
	Serious	.160 to .180	9 years
	Severe 1	.180 to .190	15 years
	Severe 2	.190 to .280	17 years
	Extreme	.280 and above	20 years
Carbon Monoxide	Moderate	9.1 to 16.4	12/31/95
	Serious	16.5 and up	12/31/00
<i>For ozone and CO: Adjustment Possible Based On 5% Rule; EPA May Grant Two One-Year Extensions of Attainment Date</i>			
PM-10	Moderate	N/A	12/31/94 6 years for future areas
	Serious	N/A	12/31/01 10 years for future areas
<i>Possible Extension of Attainment Date Up to Five Years for Serious Areas</i>			

# REQUIREMENTS FOR OZONE PLANS



# REQUIREMENTS FOR CO PLANS

MODERATE

SERIOUS

TCMs IN 2 YRS. TO OFFSET VMT

CLEAN FUEL FLEET PROGRAM ( $\geq 16.0$ PPM)

ATTAINMENT DEMO IN 2 YSR. ( $> 12.7$ PPM)

ENHANCED I/M IN 2 YRS. ( $> 12.7$ PPM)

CONTINGENCY MEASURES IN 2 YRS. ( $> 12.7$ PPM)

VMT FORECASTS & ANNUAL UPDATES ( $> 12.7$  PPM)

BASIC I/M, IF NOT PREVIOUSLY REQUIRED

OXYGENATED FUELS....MSA/CMSA

EMISSIONS INVENTORY...2 YRS; 3-YR UPDATES

SHADING INDICATES ITEMS  
THAT MAY REQUIRE NEW  
STATE LEGAL AUTHORITY

# TITLE I

## OZONE/CO SIP CONTROL STRATEGY

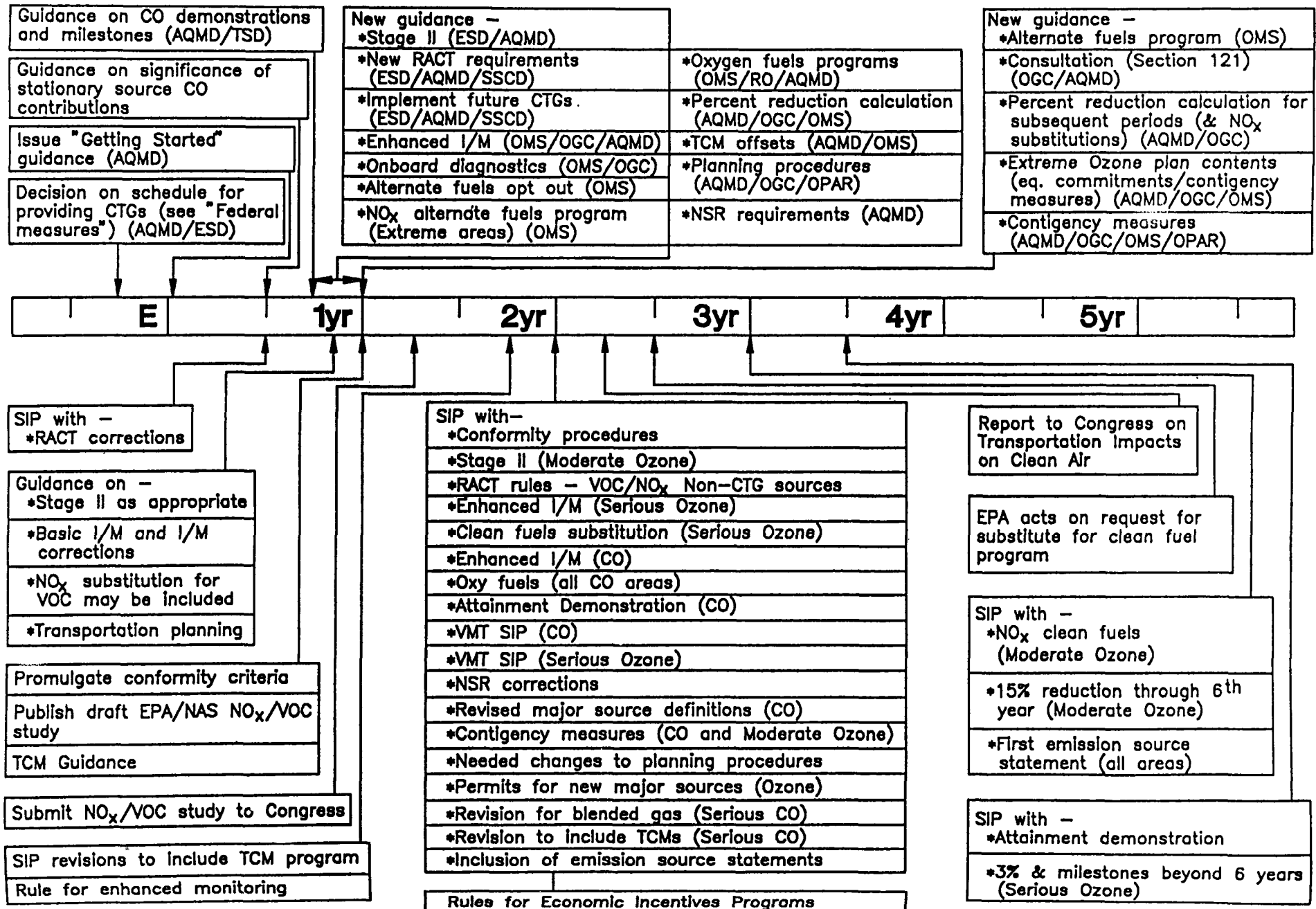
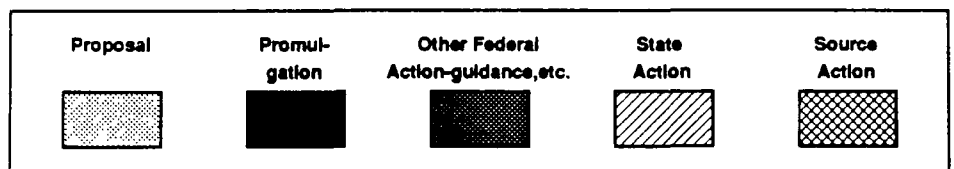
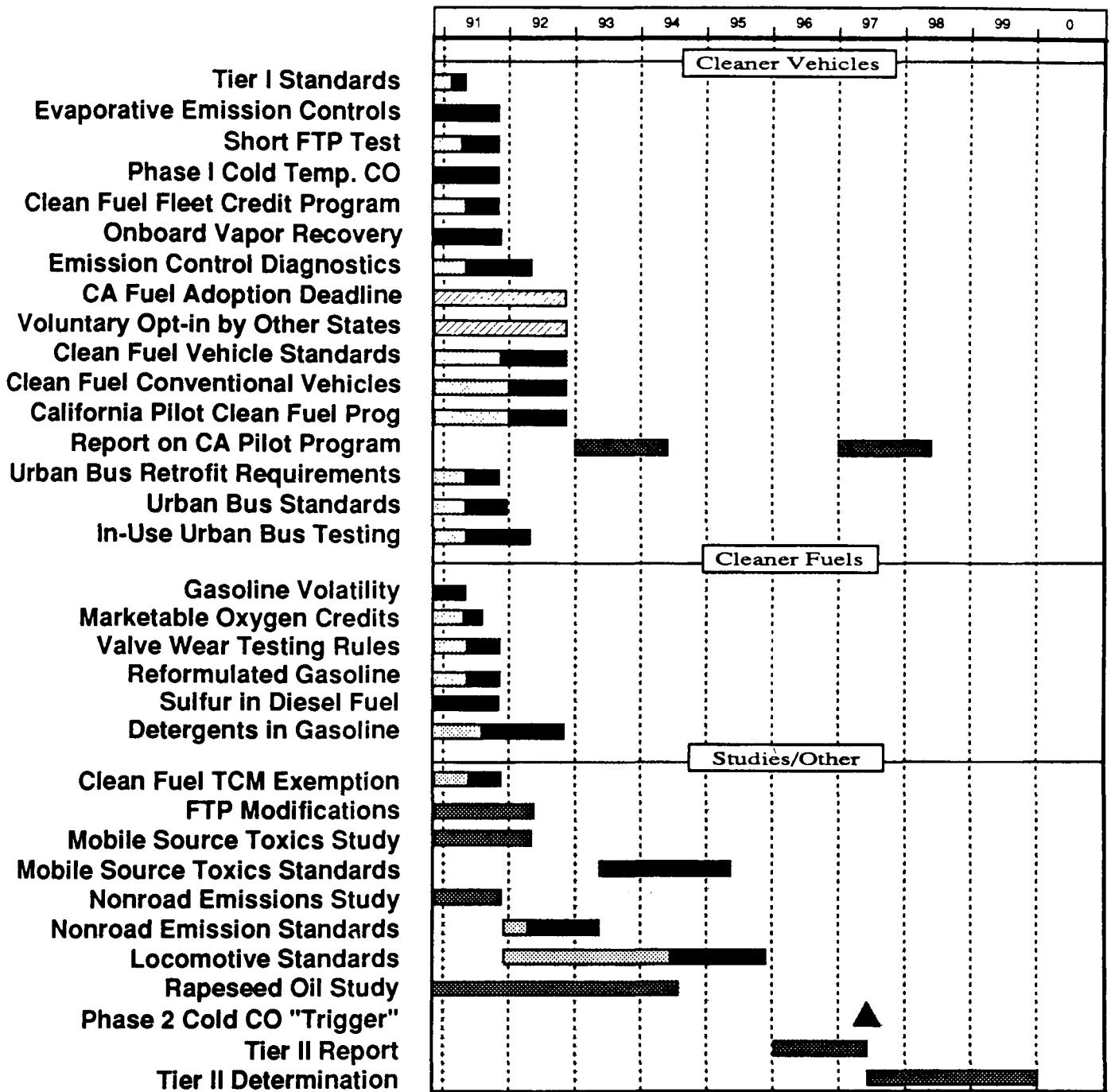
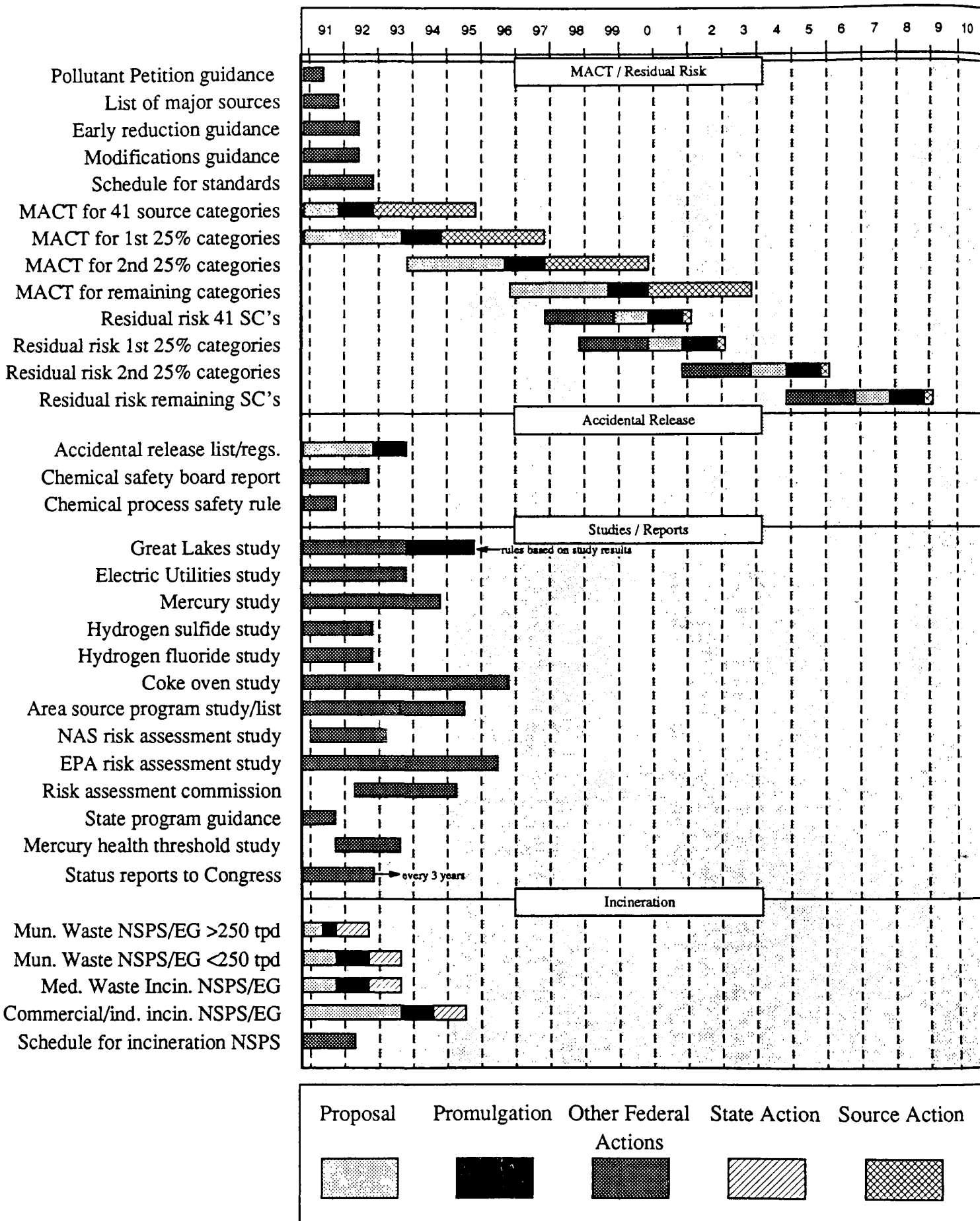


Figure B - 6

## Title II - Mobile Sources



# Title III Hazardous Air Pollutants



# TITLE III MACT/GACT (2-YEAR STANDARDS)

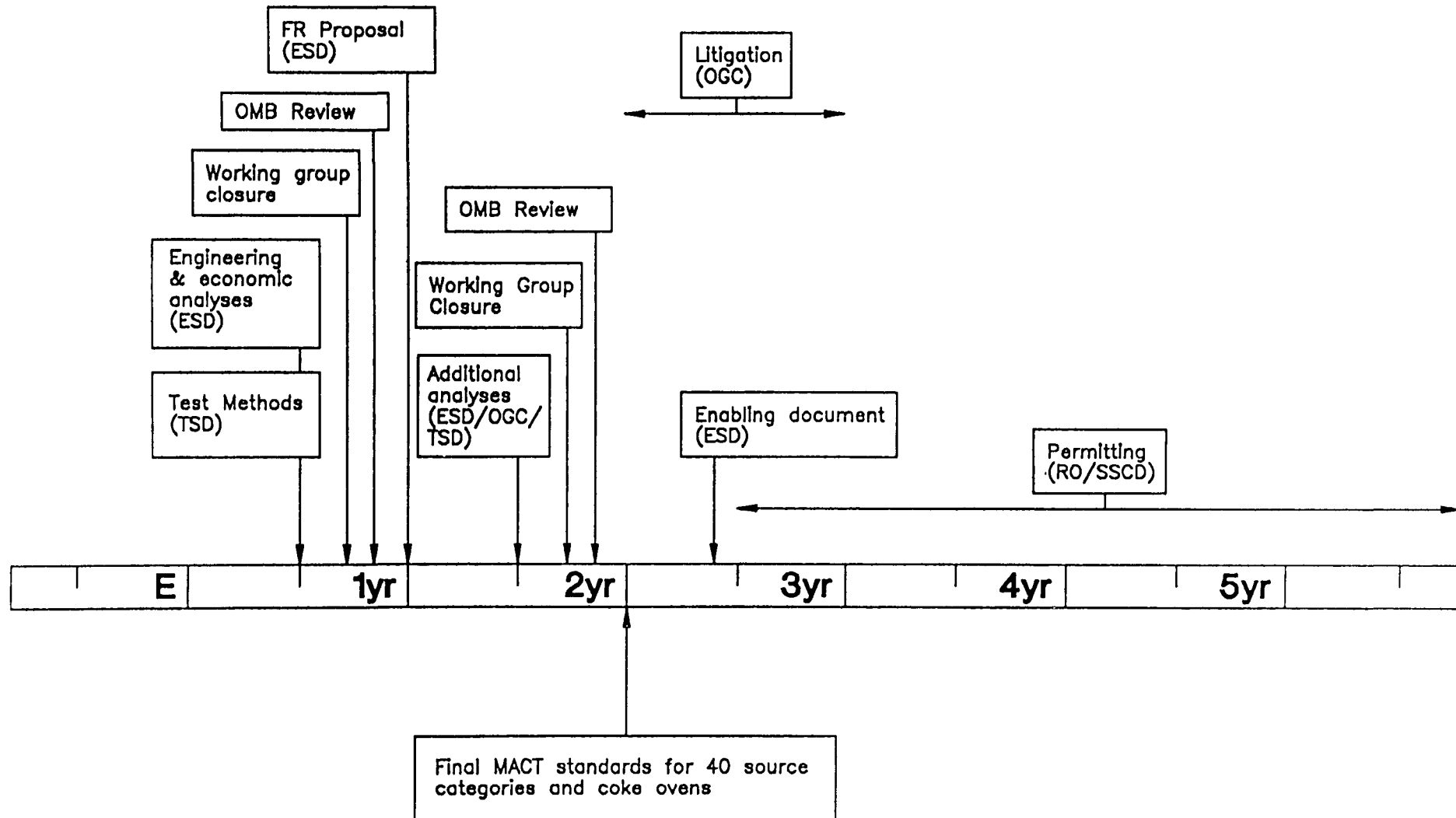


Figure B 9

# Title IV - Acid Rain

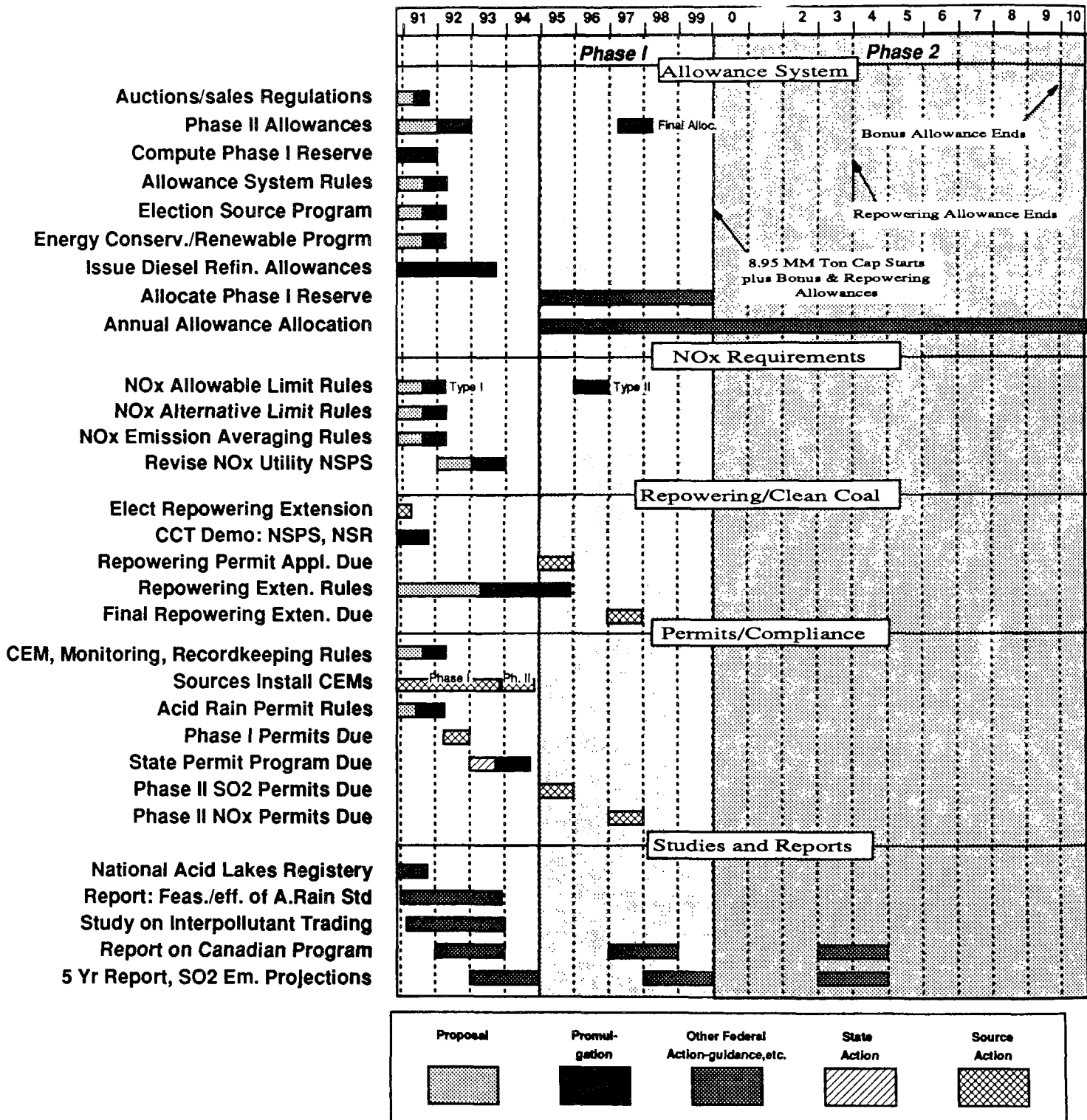
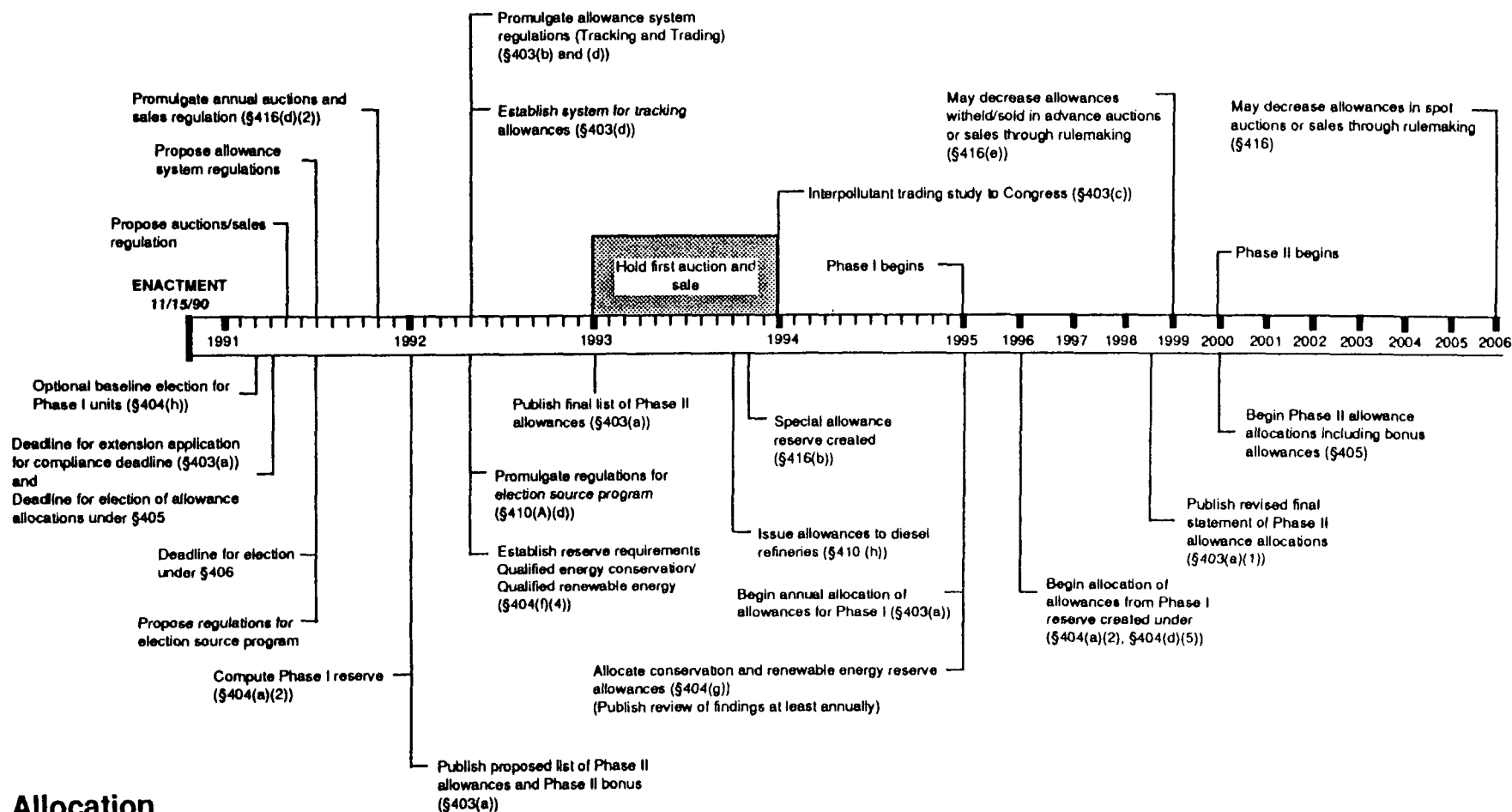




Figure B - 10

# SO2 Allowances Allocation/Trading

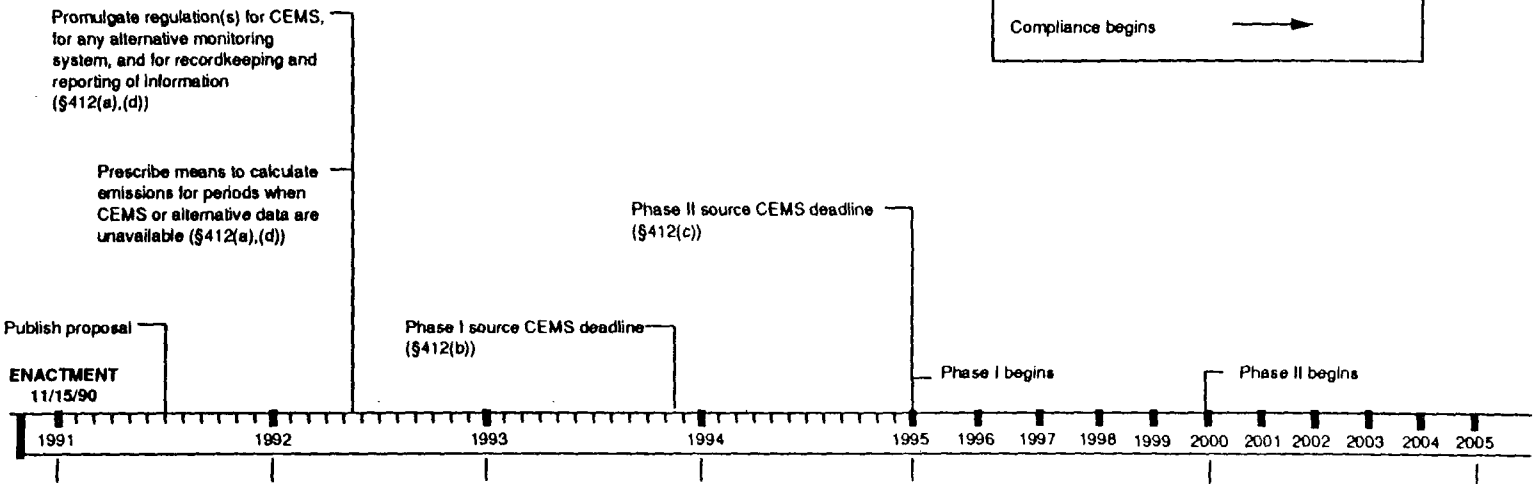
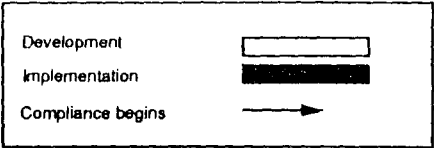
## Trading



## Allocation

Figure B - 11

Emissions Monitoring



B 12

Implementation Activities

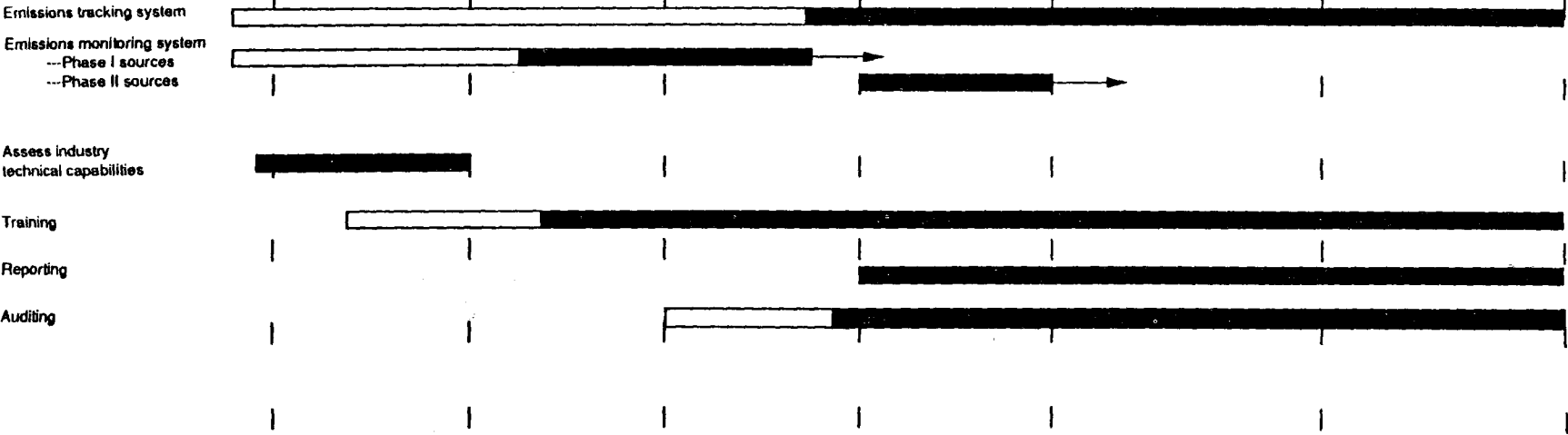


Figure B - 12

# NOx Reductions

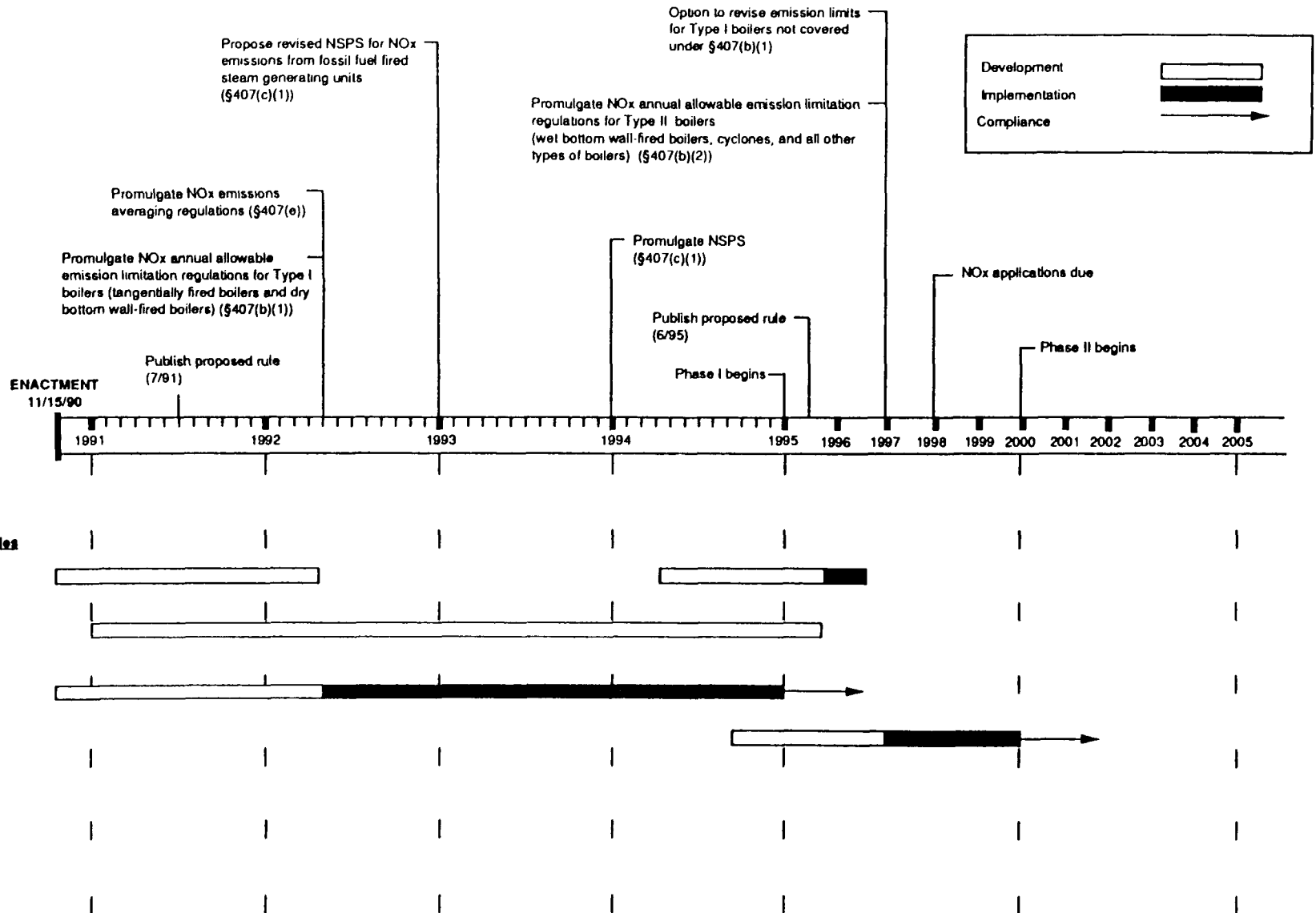
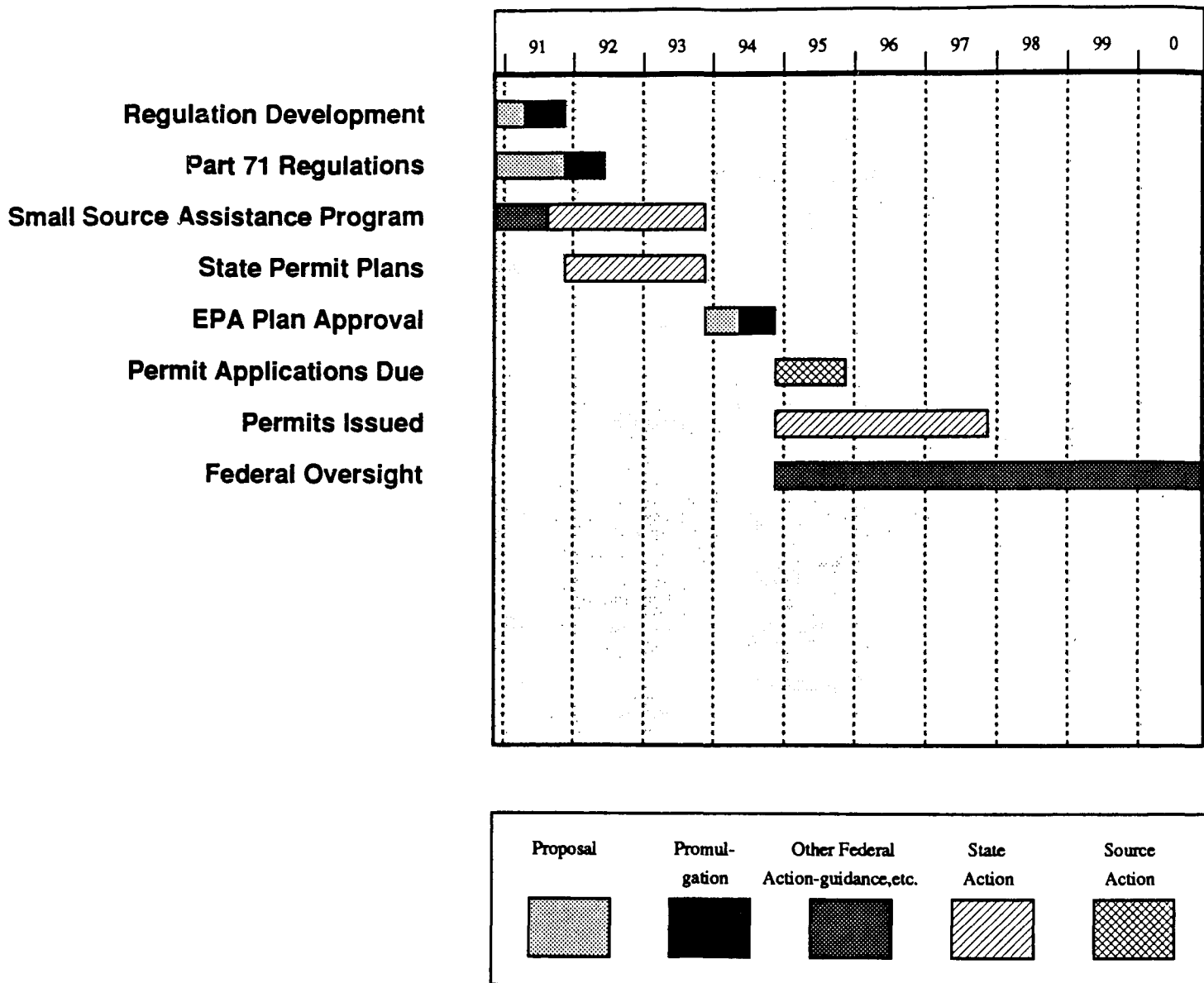


Figure B - 13

## Title V - Permits



# TITLE V PERMIT PROGRAM STARTUP

B - 15

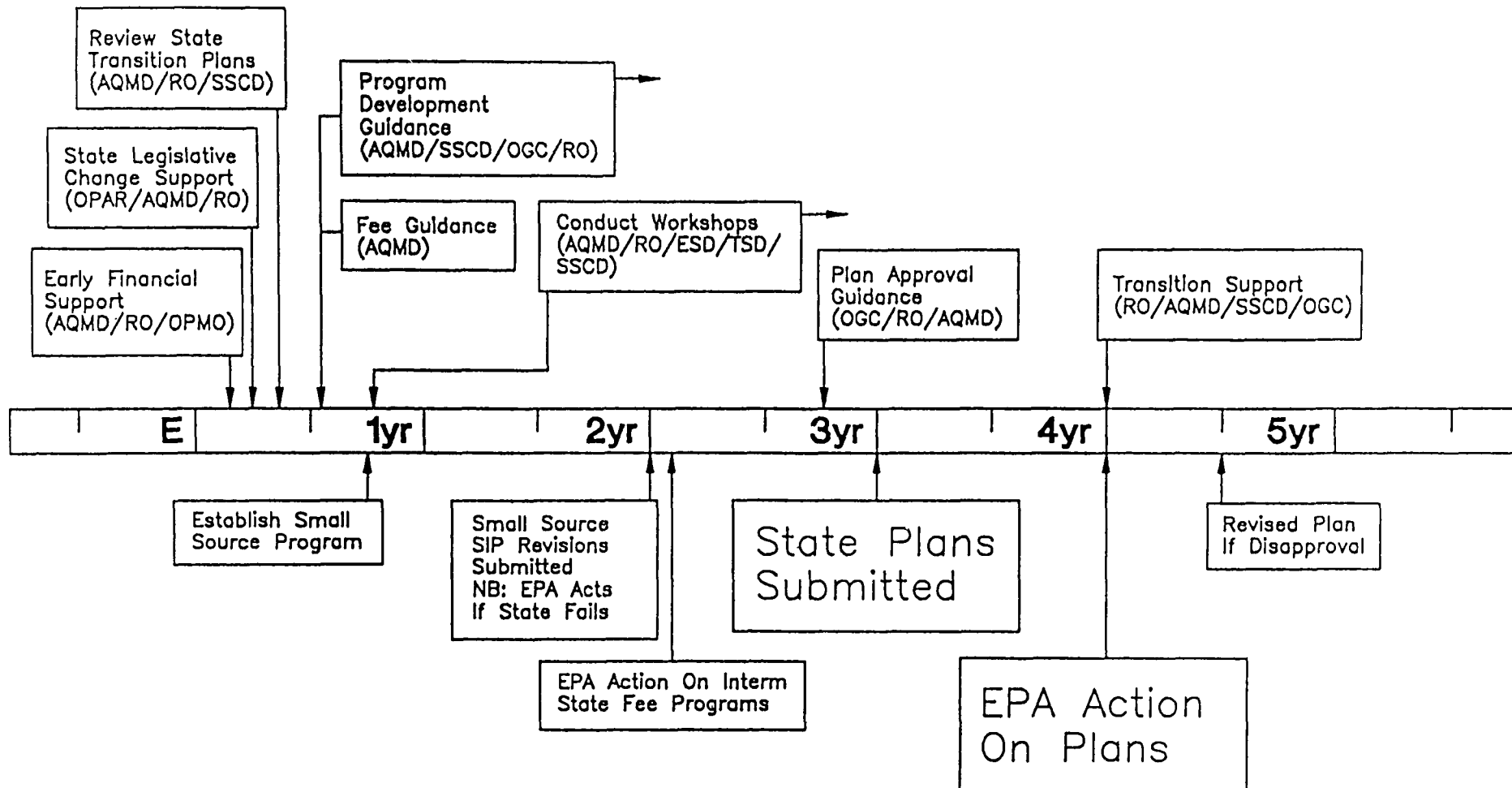


Figure B - 15

## TITLE V PERMIT PROGRAM OVERSIGHT

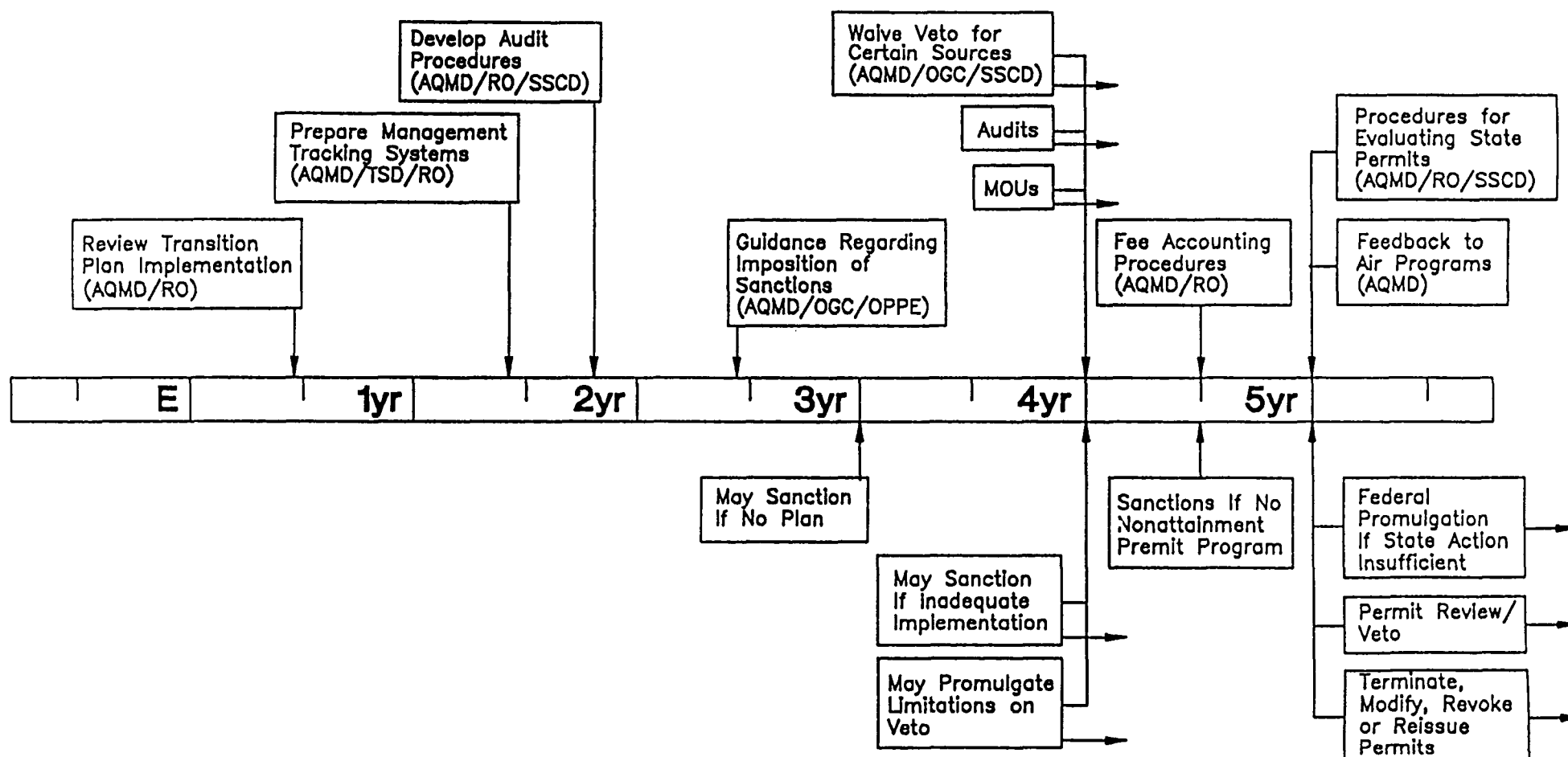


Figure B - 16

## TITLE V PERMIT REGULATION DEVELOPMENT

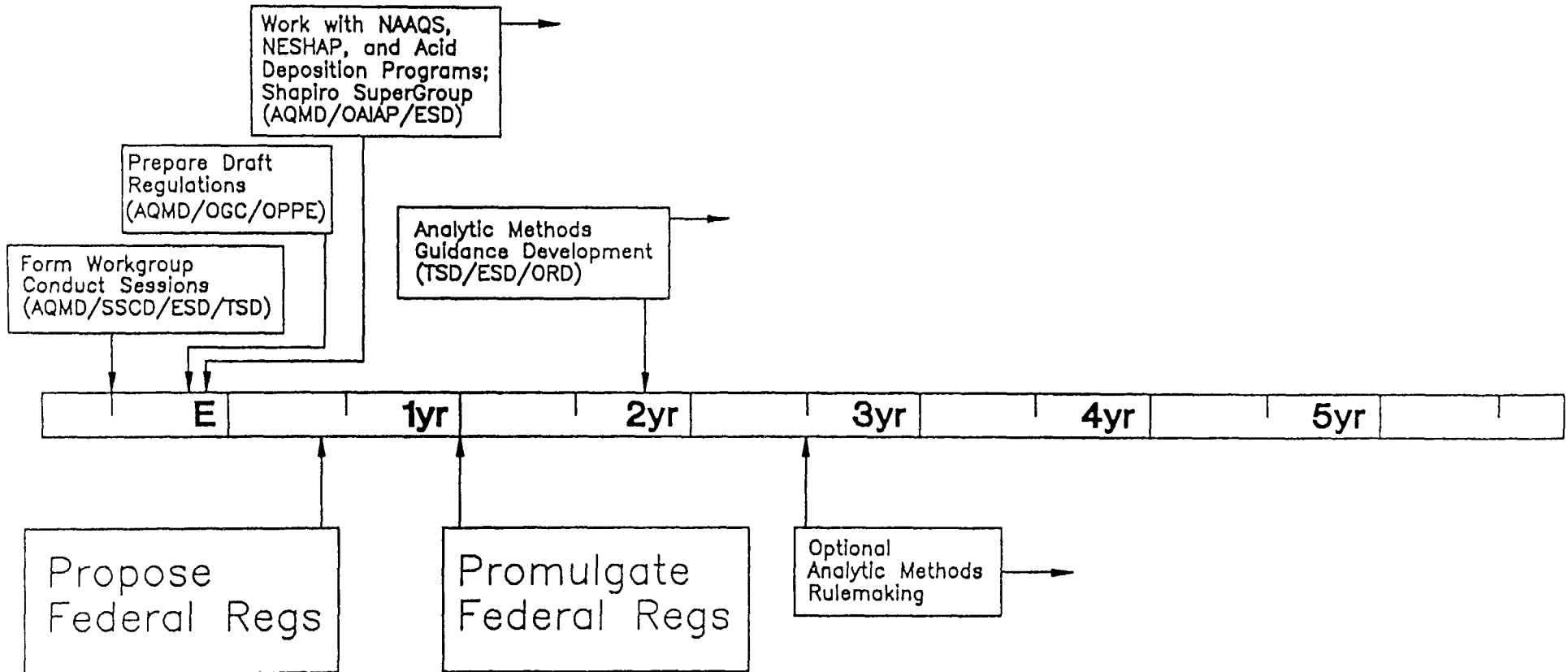
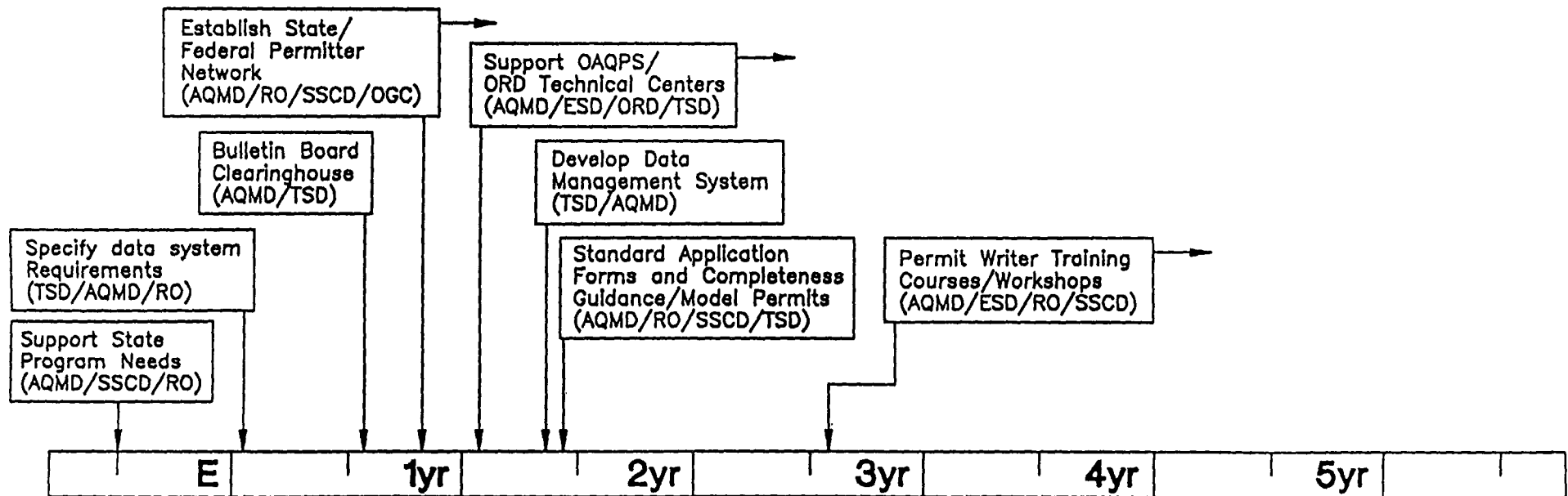


Figure B - 17

## TITLE V PERMIT PROGRAM IMPLEMENTATION SUPPORT





# Title VI - Stratospheric Ozone Protection

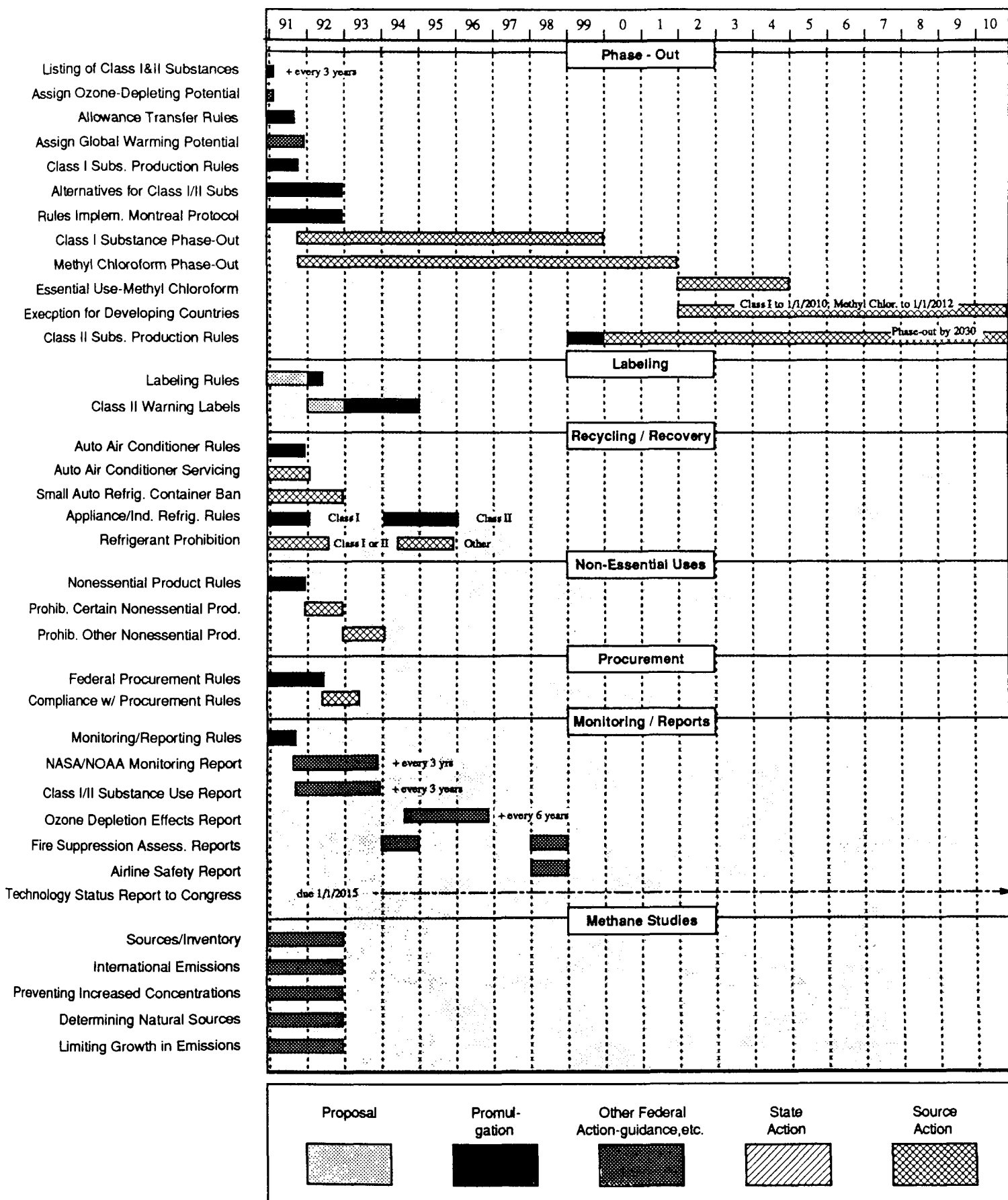
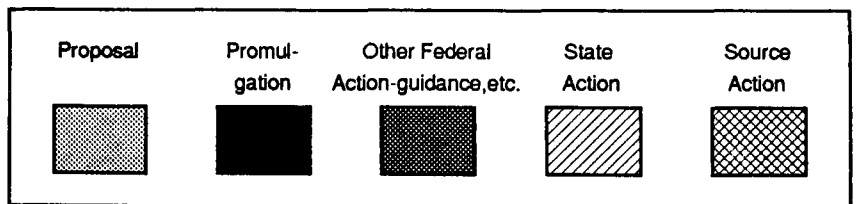
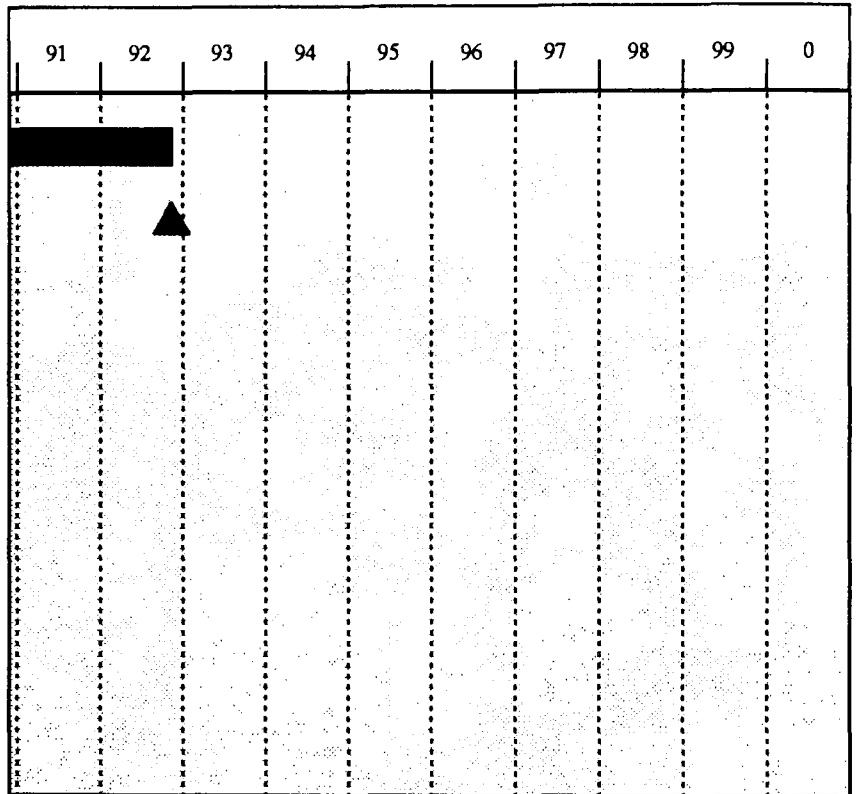


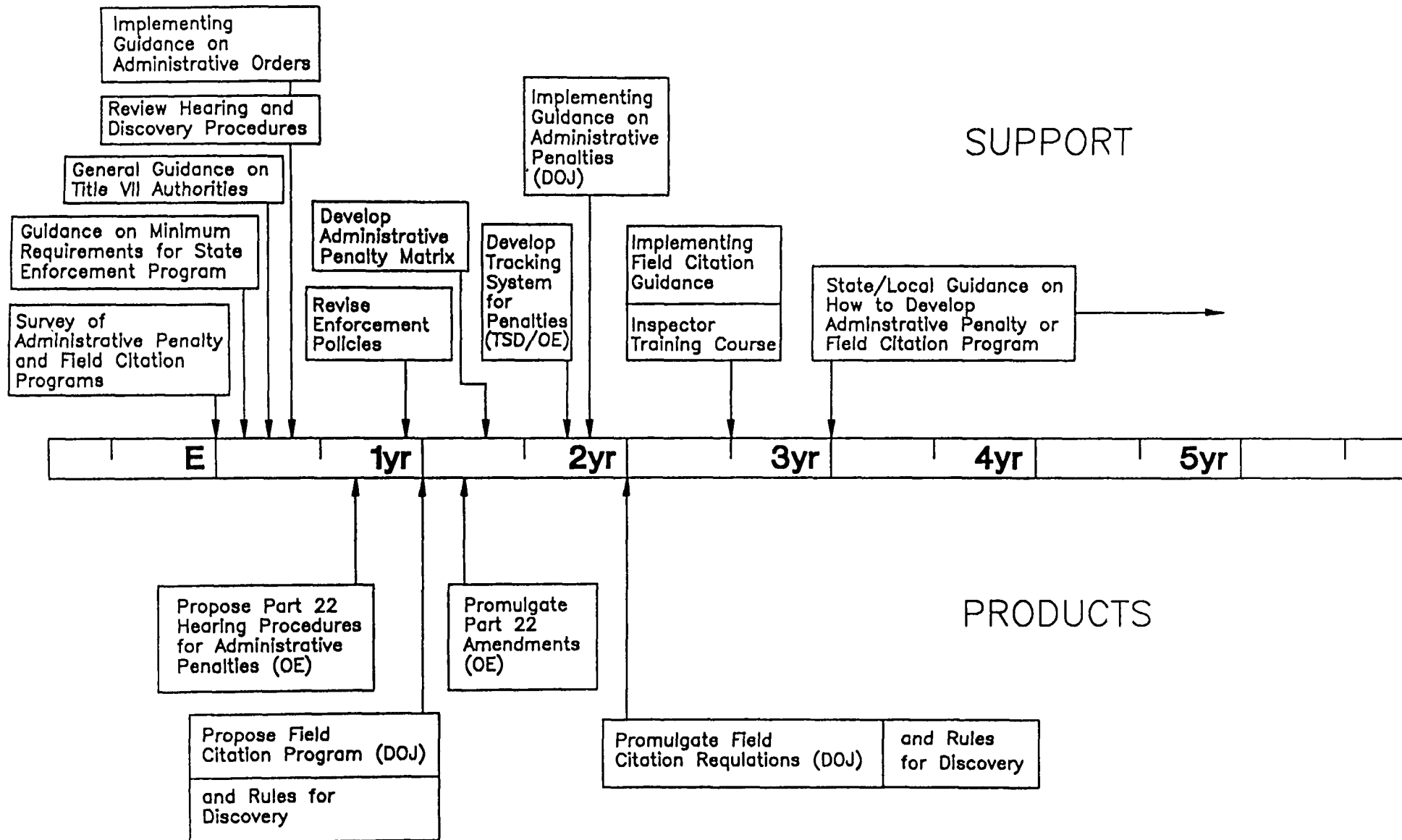
Figure B - 19

## Title VII - Provisions Relating to Enforcement

Compliance Certif./Monitoring  
Past Violations Amend. in Effect

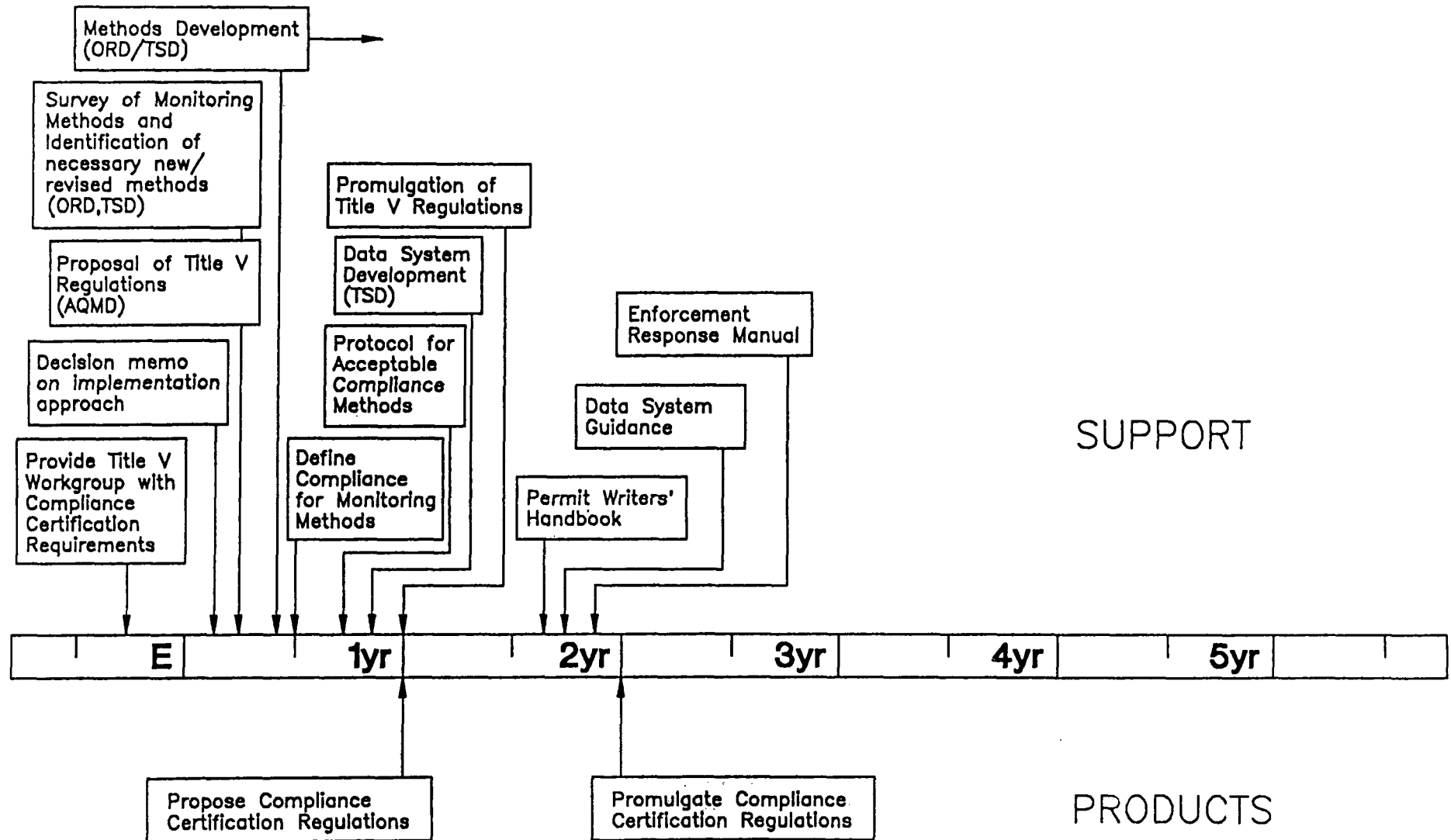


# TITLE VII ADMINISTRATIVE ENFORCEMENT PROGRAM



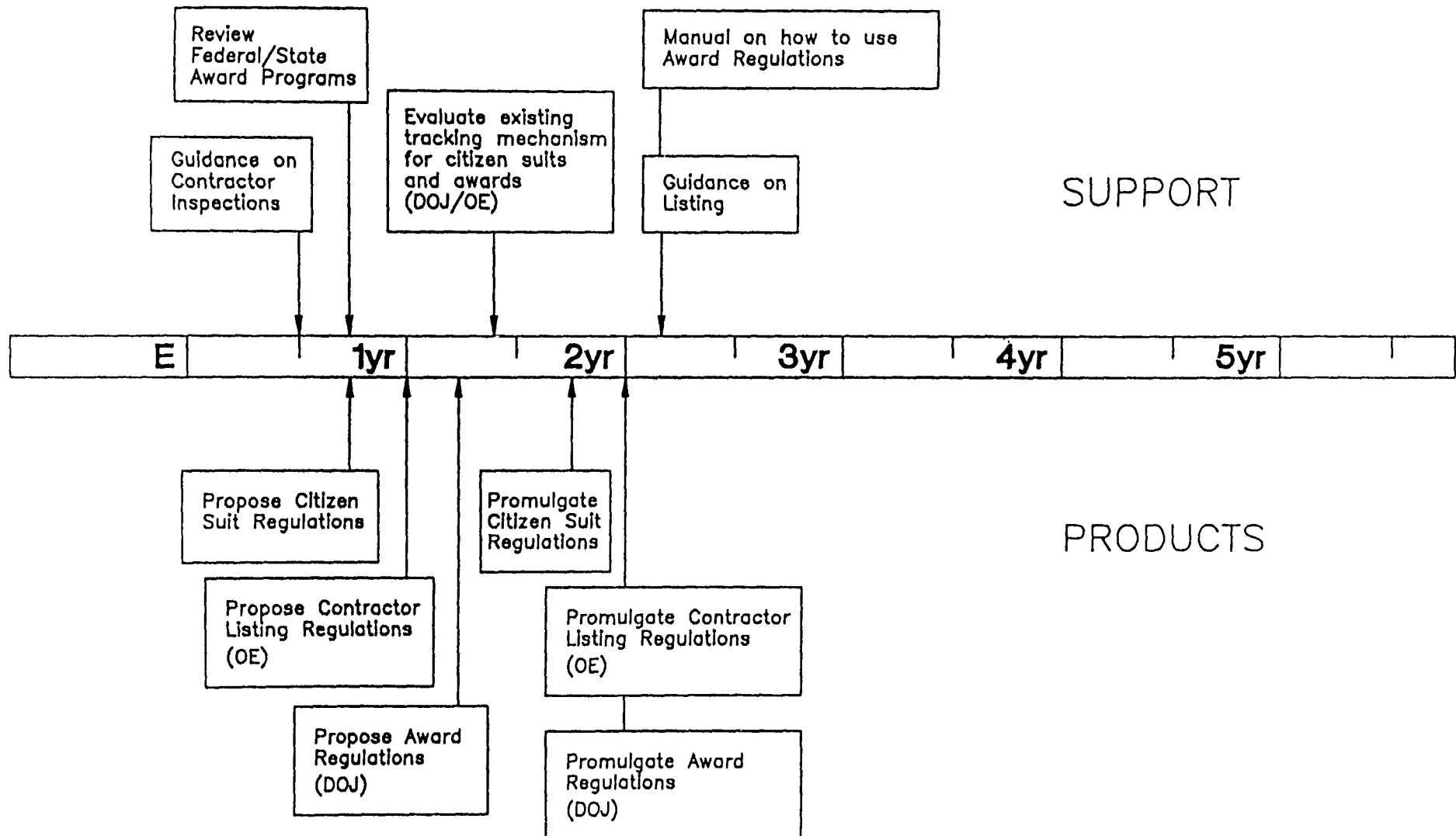
(All products and support require SSCD and AED/OE development)

# TITLE VII COMPLIANCE CERTIFICATION PROGRAM



(All products and support require SSCD development)

# TITLE VII OTHER ENFORCEMENT PROGRAMS



(All products and support require SSCD and AED/OE development)

Figure B - 23

## Title VIII - Miscellaneous

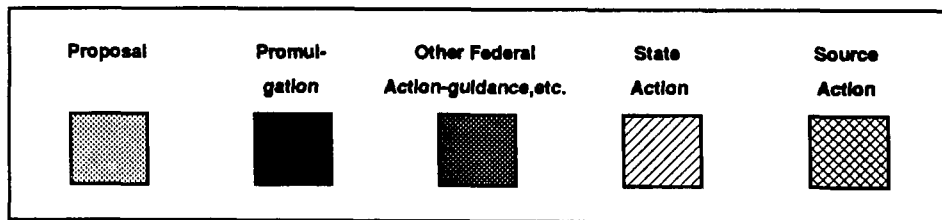
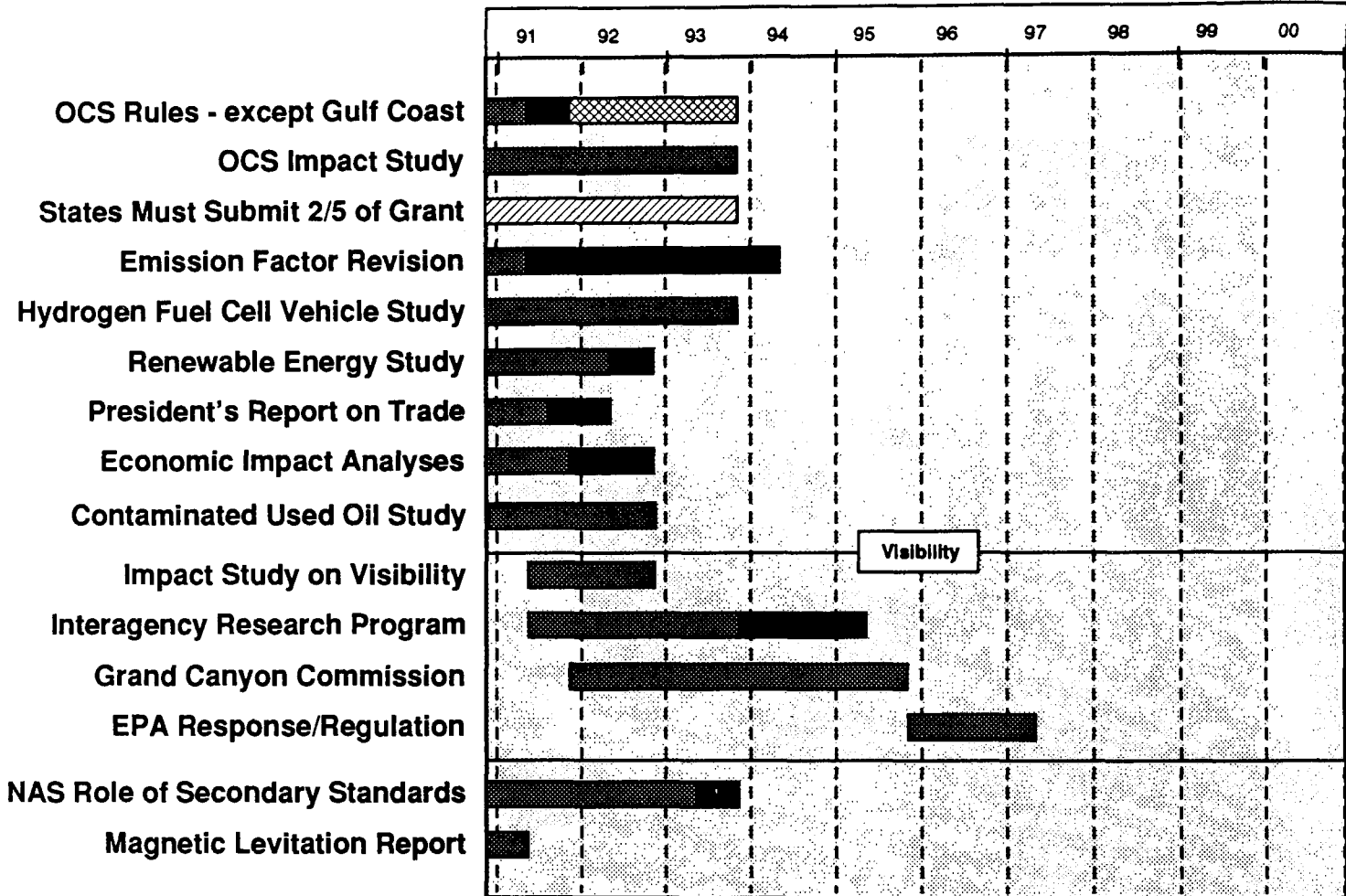


Figure B - 24

## Title IX - Clean Air Research

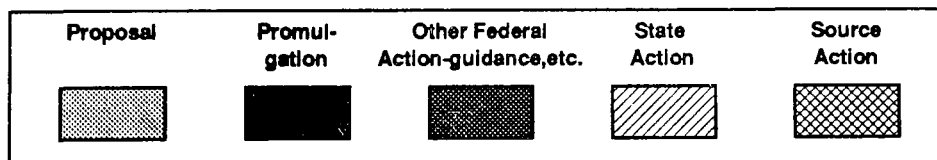
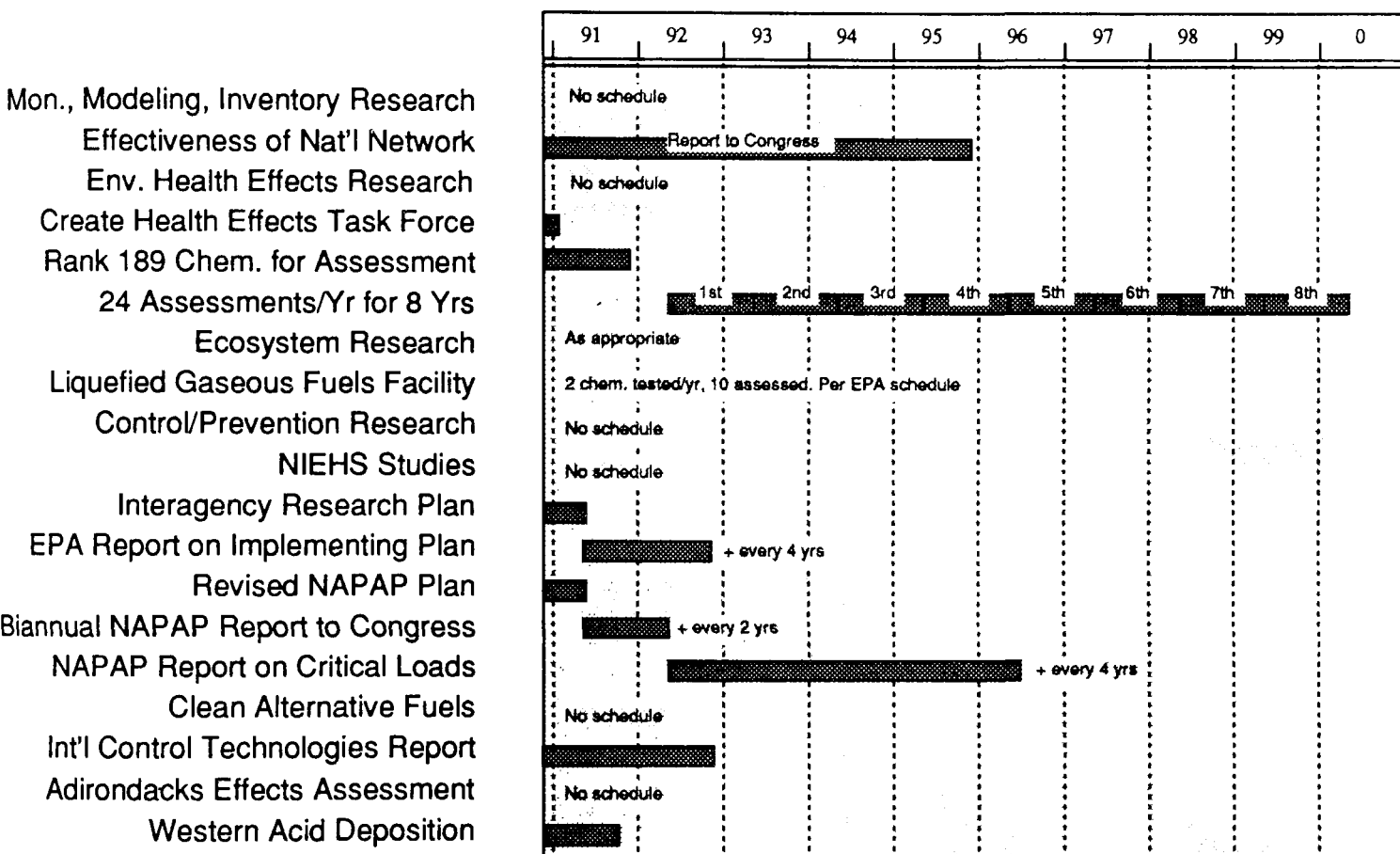
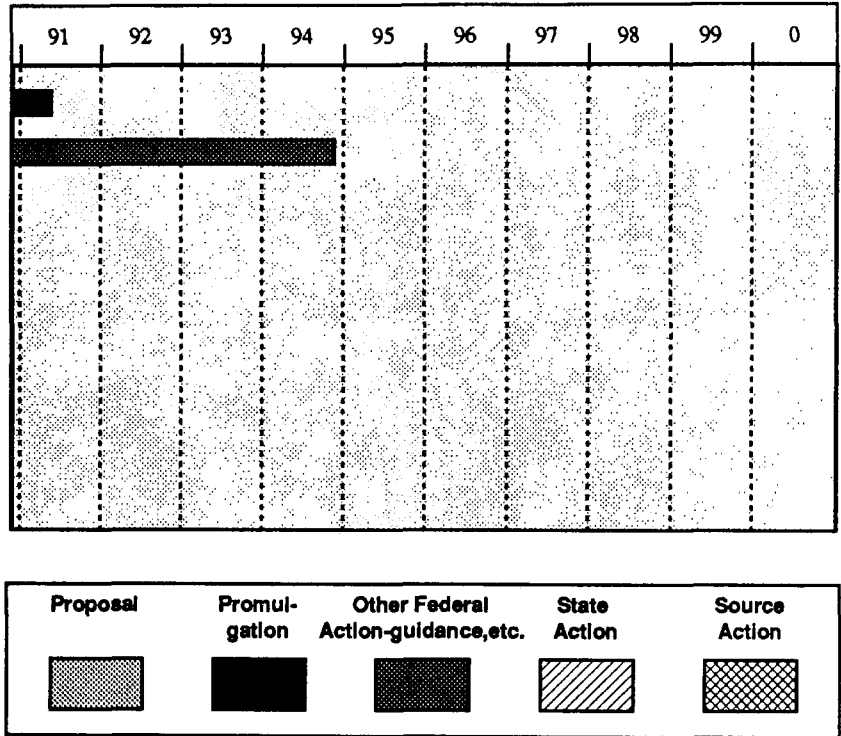


Figure B - 25

## Title XI - Clean Air Employment Transition Assistance

DOL Rules to Implement Sec. 326  
GAO Report on Employment Effects





## **APPENDIX C**

### **EPA HEADQUARTERS AND REGIONAL AIR OFFICES**

## **APPENDIX C**

### **EPA HEADQUARTERS AND REGIONAL AIR OFFICES**

The responsibility for implementing the Clean Air Act Amendments of 1990 is held primarily by EPA's Office of Air and Radiation (OAR). The OAR will utilize the expertise of many EPA offices as it undertakes this challenge, including, the Office of General Counsel, the Office of Research and Development, the Office of Solid Waste and Emergency Response, and the Office of Pesticides and Toxic Substances.

The OAR is organized into six offices. The structure of OAR is presented in Figure C-1 and a brief description of each program offices' responsibilities is presented below. In addition, EPA has ten regional offices, each with a division that focuses on air issues. Addresses and telephone numbers for appropriate headquarters and regional offices are identified following the description of the OAR program offices.

#### **OFFICE OF PROGRAM MANAGEMENT AND OPERATIONS**

The Office of Program Management Operations (OPMO) supports the Assistant Administrator for Air and Radiation in the areas of budget formulation, resource allocation, strategic planning, information management, and program evaluation. The OPMO staff provides advice and recommendations to the AA and serves as a liaison with OAR program offices. This office coordinates its activities with other EPA offices, the Office of Management and Budget, Congressional Staffs, state and local agencies, and other federal agencies.

#### **OFFICE OF POLICY ANALYSIS AND REVIEW**

The Office of Policy Analysis and Review (OPAR) coordinates and reviews the analytical basis of all major OAR regulations and policies. The office is responsible for development, formulation, and implementation of analytical studies, both in-house and through contracts, to support the policy decisions of the Assistant Administrator. In addition, OPAR reviews and analyzes the major regulatory and policy actions of the program offices as well as those developed in other media programs. The OPAR staff also provides analytical support on legislative initiatives related to the Clean Air Act. Interagency coordination of OAR regulations and policy analysis of relevant pollution

control programs, including those proposed in international forums, is another function of OPAR. The office provides direction or is otherwise substantially involved when comprehensive reviews of major policies take place.

## **OFFICE OF RADIATION PROGRAMS**

The Office of Radiation Programs (ORP) coordinates the Agency's radiation protection activities. This office will be involved in developing specific regulations for radionuclides developed under Title III of the Clean Air Act Amendments of 1990. The ORP has developed seven programs that each carry out specific objectives. The Radon Action Program provides technical and educational assistance to the states, industry and the public. The Nuclear Accident Response Program monitors and assesses offsite radiation exposures, and provides guidance during any coordinated federal response to nuclear accidents. In the area of radioactive waste disposal, ORP sets generally applicable environmental standards for the safe disposal of radioactive waste. The Radioactively Contaminated Site Program supports Superfund cleanup activities. The ORP has developed an extensive Industrial Radiation Sources Program to help the states implement regulations covering radionuclide emissions from industrial facilities. The Nonionizing Electromagnetic Fields Program takes measurements of these facilities and analyzes and distributes the data. Finally, in the area of technical assistance, ORP laboratories perform radiochemical analyses, site surveys, and evaluations of radon measuring devices.

## **OFFICE OF AIR QUALITY PLANNING AND STANDARDS**

The Office of Air Quality Planning and Standards (OAQPS) is responsible for the development of national air quality programs, technical policies, regulations, guidelines, and criteria for air pollution control. It supports many varied state and local government programs in preventing and controlling air pollution. With respect to the implementation of the Clean Air Act Amendments of 1990, OAQPS has primary responsibility for Titles I, III, V, and VII.

The OAQPS is divided into four divisions. The Air Quality Management Division is responsible for assuring that the various air quality management programs and objectives required by the Clean Air Act are implemented and that the national ambient air quality standards (NAAQS) are maintained. The Emission Standards Division has responsibility for evaluating the need to regulate potential air pollutants, developing national emission standards for stationary sources, and providing consultation to other segments of the Agency and state and local programs. The Technical Support Division

directs a national program to provide scientific and technical guidance to EPA headquarters and regional offices, and state and local agencies regarding air quality monitoring, emissions factors, and source test methods. The Stationary Source Compliance Division is the only headquarter-based component of the office responsible for ensuring that stationary sources achieve and maintain compliance with the Clean Air Act.

## **OFFICE OF MOBILE SOURCES**

The Office of Mobile Sources (OMS) sets and enforces emission standards for motor vehicles, engines, and fuels, and provides guidance and technical support to state and local programs for the control of motor vehicle emissions. As such, it has the lead in implementing Title II of the Clean Air Act Amendments of 1990. Engineering and other scientific assessments of control technologies and fuel economy are conducted in this office. Assessments of the economic aspects of control requirements, including the identification and development of market-based alternative control mechanisms are carried out. The office conducts investigations to determine compliance with EPA regulations and develops and carries out studies for assessing sources of air pollutants from motor vehicles. New or emerging pollution control technologies for motor vehicles and fuels are analyzed to determine, for example, emissions of toxic substances.

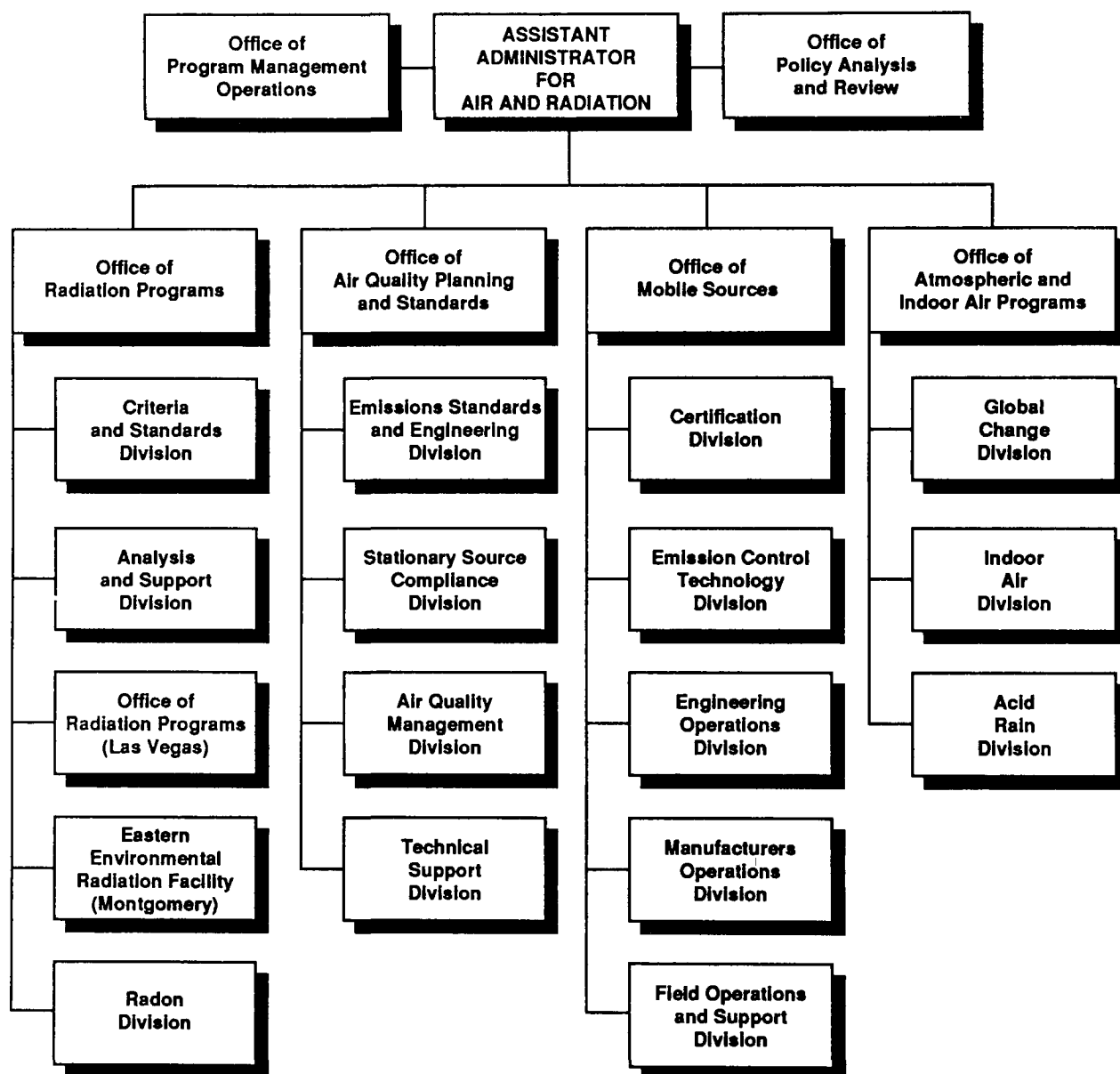
## **OFFICE OF ATMOSPHERIC AND INDOOR AIR PROGRAMS**

The Office of Atmospheric and Indoor Air Programs (OAIAP) has lead responsibility for the Agency's acid rain, indoor air, and stratospheric ozone programs. In addition, OAIAP examines various strategies for mitigating climate change. With respect to implementation of the Clean Air Act Amendments of 1990, OAIAP has responsibility for Titles IV and VI.

The OAIAP is divided into three divisions. The Acid Rain Division was recently created to respond to the acid rain provisions in the Clean Air Act Amendments of 1990. The Global Climate Change Division has responsibility for reducing atmospheric change through the stratospheric ozone protection program, energy initiatives, and pollution prevention strategies. The Indoor Air Division is responsible for overall Agency indoor air policy, coordination of federal and private sector efforts to characterize and mitigate pollution problems in buildings, and development and dissemination of information on indoor air quality to a wide range of audiences.

Figure C-1

OFFICE OF AIR AND RADIATION ORGANIZATIONAL CHART



## OFFICE TELEPHONE NUMBERS AND ADDRESSES

### HEADQUARTERS OFFICES

<u>Office and Address</u>	<u>Telephone Number</u>
Office of Air and Radiation	
Office of the Assistant Administrator U.S. EPA, ANR-443 401 M. Street, S.W. Washington, D.C. 20460	(202) 382-7400 FTS 382-7400
Office of Program Management Operations U.S. EPA, ANR-443 401 M. Street, S.W. Washington, D.C. 20460	(202) 382-7415 FTS 382-7415
Office of Policy Analysis and Review U.S. EPA, ANR-443 401 M. Street, S.W. Washington, D.C. 20460	(202) 382-5580 FTS 382-5580
Office of Radiation Programs U.S. EPA, ANR-458 401 M. Street, S.W. Washington, D.C. 20460	(202) 475-9600 FTS 475-9600
Office of Air Quality Planning and Standards U.S. EPA, MD-10 Research Triangle Park, North Carolina 27711	(919) 541-5616 FTS 629-5615
Office of Mobile Sources U.S. EPA, ANR-455 401 M. Street, S.W. Washington, D.C. 20460	(202) 382-7645 FTS 382-7645
Office of Atmospheric and Indoor Air Programs U.S. EPA, ANR-445 401 M. Street, S.W. Washington, D.C. 20460	(202) 382-7407 FTS 382-7407

**Office and Address****Telephone Number****Office of Solid Waste and Emergency Response**

Chemical Emergency Preparedness and  
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U.S. EPA, OS-120  
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FTS 475-8600

**Office of General Counsel**

Air and Radiation Division  
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**Office of Research and Development**

Office of the Assistant Administrator  
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**REGIONAL OFFICES****Office and Address****Telephone Number**

Region I - Air Management Division  
U.S. EPA - Region I  
John F. Kennedy Building  
Boston, MA 02203

(617) 565-3800  
FTS 835-3800

Region II - Air and Waste Management Division  
U.S. EPA - Region II  
Jacob K. Javitz Federal Building  
26 Federal Plaza  
New York, NY 10278

(212) 264-2301  
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Region III - Air, Toxics, and Radiation Division U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107	(215) 597-9390 FTS 597-9390
Region IV - Air, Pesticides, and Toxics Management Division U.S. EPA - Region IV 345 Courtland Street, N.E. Atlanta, GA 30365	(404) 347-3043 FTS 257-3043
Region V - Air and Radiation Division U.S. EPA - Region V 230 South Dearborn Street Chicago, IL 60604	(312) 353-2212 FTS 353-2212
Region VI - Air, Pesticides, and Toxics Division U.S. EPA - Region VI First Interstate Bank Tower at Fountain Place 1445 Ross Avenue, 12th Floor, Suite 1200 Dallas, TX 75202-2733	(214) 655-7200 FTS 225-7200
Region VII - Air and Toxics Division U.S. EPA - Region VII 726 Minnesota Avenue Kansas City, KS 66101	(913) 551-7020 FTS 276-7020
Region VIII - Air and Toxics Division U.S. EPA - Region VIII 999 18th Street, Suite 500 Denver, CO 80202-2405	(303) 293-1438 FTS 330-1438
Region IX - Air and Toxics Division U.S. EPA - Region IX 75 Hawthorne Street San Francisco, CA 94105	(415) 744-1219 FTS 484-1219



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