GAO

Testimony

Before the Subcommittee on Oversight and Investigations,
Committee on Energy and Commerce, House of Representatives

For Release
on Delivery
Expected at
10:00 a.m. EST
Tuesday
November 12, 1991

AIR POLLUTION

EPA's Strategy and Resources May Be Inadequate to Control Air Toxics

Statement of
J. Dexter Peach, Assistant Comptroller General
Resources, Community, and Economic Development Division

Mr. Chairman and Members of the Subcommittee:

Toxic air pollution is one of the most significant environmental problems in the United States today, with many toxic air pollutants still unregulated. For this reason, we appreciate the opportunity to discuss our report, Air Pollution: EPA'S Strategy and Resources May Be Inadequate to Control Air Toxics (GAO/RCED-91-143, June 26, 1991), which we issued to the Subcommittee in June 1991, and our follow-up work performed at your request.

Through passage of the Clean Air Act Amendments of 1990, the Congress required EPA to regulate 189 of the most hazardous and pervasive air toxics within 10 years. This represents more than a twenty-fold increase in the number of air toxics regulated to date. We believe, as do many others, that good planning and adequate resources are essential to carrying out a program of this magnitude. Our work, however, calls into question both the adequacy of EPA's planning and the sufficiency of its requested resources for implementing the air toxics provisions of the act. Specifically, we found that:

-- EPA's strategy does not present a clear roadmap of where the agency is going and how it intends to get there. It fails to discuss the actions, activities, tasks, or even the definitions of key terms and concepts necessary to ensure the agency's success in achieving the act's air toxics objectives.

-- EPA did not request sufficient funds to fully implement the act's air toxics provisions within the time frames envisioned. The agency's air toxics budget request for fiscal year 1992 was about one-half of the funds that agency budget documents indicate are needed to fully implement the act.

Before I discuss these concerns further and EPA's recent actions to address our recommendations, let me briefly focus on a second issue that you asked us to address in my statement today--the effectiveness of vehicle inspection and maintenance (I/M) programs. These programs are designed to improve the air quality in urban areas by identifying vehicles emitting excess pollutants and requiring that necessary repairs be made. Our July 1990 report, Air Pollution: EPA Not Adequately Ensuring Vehicles Comply with Emission Standards (GAO/RCED-90-128), concluded that EPA's monitoring of state I/M programs was inadequate. We reported that EPA lacks sufficient data to measure I/M programs' compliance because (1) many states are not providing comprehensive program data and (2) EPA does not audit programs frequently enough to obtain the needed data. For example, we found that 21 of 36 programs in operation from January 1987 to June 1989 provided 50 percent or less of the data EPA needed to assess compliance. As a result, EPA cannot ensure that vehicle I/M programs are achieving the air quality benefits anticipated.

A recent EPA Inspector General report indicates that weaknesses continue to exist in EPA's I/M program. In its August 1991 report, the Inspector General identified such I/M weaknesses as certifying vehicles covertly set to fail, use of unreliable vehicle testing equipment, and EPA acceptance of insufficient test data on whether state programs were operating effectively. I understand that the Inspector General will testify on I/M programs this morning, so I will not go into these issues further at this point except to say that the act's requirement for enhanced I/M programs in the more seriously polluted areas of the country makes it even more imperative that EPA improve its oversight and monitoring of I/M programs.

MAGNITUDE OF THE AIR TOXICS PROBLEM

At this point I would like to briefly discuss the magnitude of the air toxics problem and recent efforts to deal with it, including the new two-phased approach to controlling air toxics provided in the 1990 amendments and EPA's recent efforts to streamline its regulatory process.

Toxic air pollution arises from the production of a variety of goods and services, ranging from tennis shoes to electric power. Sources include chemical plants, steel mills, utilities, refineries, textile and furniture manufacturers, pulp and paper mills, dry cleaners, and automobiles, among others. The actual number of U.S. facilities emitting air toxics is unknown, but EPA estimates that up to

30,000 facilities in the United States are major sources[1] of airborne toxics. In 1988 industry released more than 2.4 billion pounds of toxic chemicals into the nation's air. Industry data show that more toxic chemicals are released into the nation's air than to land or water. Airborne toxics are estimated by EPA to cause up to 3,000 cases of fatal cancer yearly, as well as birth defects, lung disease, liver damage, nervous system disorders, and other health problems.

Title III of the Clean Air Act Amendments of 1990 requires EPA to control 189 of the most prevalent and hazardous toxic air pollutants--such as arsenic, cyanide, and formaldehyde--through a new two-phased regulatory process. In phase one, EPA is to develop standards--known as Maximum Achievable Control Technology or MACT standards--within 10 years for the pollution controls to be used at all major air toxics sources. In this first phase, major sources must install control equipment or change their manufacturing processes sufficient to reduce toxic emissions to levels at least as stringent as those already achieved by the best-performing facilities in a category or subcategory. To comply with phase one, among other things, EPA is required to establish MACT standards for 40 source categories and subcategories by November 1992, for 25 percent of all source categories and subcategories by November 1994, for 50 percent by November 1997, and for all source categories and subcategories by November 2000. EPA's stated goal for this first phase is a 75-percent reduction in air toxics emissions.

Not later than 8 years after promulgating MACT standards, EPA is required--in phase two--to assess the remaining health and environmental risks from toxic air pollutants and, if warranted, impose

---

[1]Major sources are those with the potential to emit 10 or more tons of any one air toxic annually, or 25 or more tons of a combination of air toxics annually.

further controls to reduce emissions to safe levels. Doing this will require substantial additional health and ecological studies as well as risk assessment and risk reduction research to understand the cancer and other adverse health effects associated with toxic air pollutants and the impacts on the environment. Because assessing and reducing risks is a complex, costly process, the act also calls for the National Academy of Sciences, the Surgeon General, EPA, and others to examine the risk assessment methodology historically employed by EPA and recommend changes by November 1996. Irrespective of possible changes in EPA's methodology, the act requires that these second phase controls reduce the risk of cancer to less than one in one million for the most exposed individual.

Title III of the act also requires EPA to establish a Chemical Safety and Hazard Investigation Board--similar to the National Transportation Safety Board--to investigate and report on the causes of any accidental toxic releases resulting in fatality, serious injury, or substantial property damage. In addition, the act requires EPA to perform 12 major studies within 2 to 6 years of emerging environmental issues such as toxic bioaccumulation, health hazards associated with electric utility emissions, and urban air toxics.

Promulgation of EPA air regulations has historically been slow, with some regulations taking up to 9 years or more from the start of development to promulgation. Given the act's mandate that EPA issue more than 55 rules in 2 years--one of which involves establishing MACT standards for 40 categories of sources--EPA plans to streamline its traditional rulemaking process. This streamlining involves modifying EPA's internal regulatory review process to provide for (1) early and frequent informal consultations with interested parties, (2) formal negotiated rulemakings to resolve more complex issues, and (3) use of air pollution advisory committees. The advisory committees are to include representatives from industry, labor, agriculture, environmental and citizen groups, state and local governments, and academia. As of March 1991, EPA officials had not set a specific goal

for the amount of time that could be saved, but estimated that major rules and regulations could be issued under this scenario in 6 months to 5 years.

AIR TOXICS STRATEGY LACKS KEY DETAILS

EPA recognizes that the Clean Air Act Amendments of 1990 offer an opportunity to make major gains in the control of toxic air pollutants. Anticipating the act's passage, EPA initiated planning activities early to help meet envisioned tight time frames. In January 1991 EPA issued an implementation strategy that describes the act's air toxics provisions, summarizes the time frames for achieving selected requirements, and recognizes that some implementation issues, such as how a source will be defined and how voluntary emissions reductions will be handled, remain unresolved.

However, as we reported in June, EPA's strategy does not (1) explain how EPA will substantiate proposed regulatory decisions on less scientific information; (2) address how the agency will approach cost and energy determinations; (3) discuss the feasibility of using generic measurement methods in enforcing compliance with air toxics standards; or (4) explain the basis for dividing major air toxics sources into numerous categories and subcategories requiring different control standards. During the course of our review EPA did not agree that a more detailed strategy was needed. However, we recently learned that EPA has reassessed its position and intends to issue a more detailed air toxics strategy very soon, hopefully within 30 days.

We continue to believe, as we stated in our June 1991 report, that a detailed strategy is important because EPA's success in reducing the time it takes to issue regulations depends, in part, on the agency's ability to get early, meaningful involvement of external organizations. Representatives of several external organizations we contacted said they greatly appreciate the opportunity to participate in the earliest stages of rulemaking, believe such consensus building

efforts can work, and believe that EPA is to be commended for this new openness. However, EPA's vague strategy has been little help to them in understanding how the agency plans to accomplish the act's air toxics objectives. We hope that EPA's revised implementation strategy, when issued, will help these external groups--whose cooperation is critical to meeting the time frames required in the act--more fully participate in the rulemaking process.

At this point we would like to discuss some of the key weaknesses in EPA's current strategy that we believe EPA's revised implementation strategy should address.

Strategy Does Not Explain Basis For Using Less Scientific Information

In the past, EPA managers wanted as much information as possible on the health and environmental effects of toxic air pollutants to ensure they set standards at the appropriate level. Consequently, according to EPA scientists, assessing the health and environmental effects of individual toxic substances generally required from 3 to 5 years of research. Although EPA officials and representatives of environmental groups recognize that EPA will have to base its phase one MACT decisions on less research, they were concerned about EPA's ability to make phase two residual risk decisions using less scientific information and technical data. Although EPA scientists estimate that 25 to 40 percent of sources will still present significant risks to human health after MACT controls are installed, EPA's strategy does not address how the agency plans to collect the needed scientific information and technical data to make such decisions.

Strategy Does Not Address EPA's Approach To Cost and Energy Determinations

The act directs EPA to consider cost and energy factors in establishing MACT standards, but allows EPA to decide the extent to

which cost and energy may affect the amount of reductions required. Although these considerations are among the most important in establishing MACT standards, EPA's strategy does not address the agency's plans in this area. These factors are important because industry must bear the cost of installing and operating control devices. As we reported in June, opinions vary as to which approach EPA should take in considering the cost of its standards. Appendix I presents a chart exploring the different cost/benefit options identified during the course of our review. Representatives of several external groups we contacted are concerned that economic factors may cause EPA to unduly weaken its air toxics standards under the new act. Until resolved and addressed in EPA's revised strategy, such cost/benefit concerns, in the view of these representatives, could hinder EPA's efforts to build consensus and expedite rules.

Strategy Does Not Discuss The Feasibility of Generic Measurement Methods

One approach EPA hopes will accelerate setting MACT standards is the use of generic measurement methods for many toxic air pollutants. Under this approach, compliance with air toxics permits would not be based on measuring the specific toxic air pollutant identified in the act, but instead would be based on (1) measuring emissions of a generic class of compounds, such as aldehydes, rather than measuring specifically for a single air toxic, such as formaldehyde, or (2) measuring for a surrogate substance, by monitoring the emission levels of all volatile organic compounds, for example, and then applying a formula to estimate the amount of the regulated toxic substance included in these emissions. Although EPA lacks measurement methods for 149 of the 189 air toxics specified in the act, its current strategy omits any discussion of the use of generic measurement methods.

EPA officials, representatives of environmental groups, and state and local air quality officials have expressed some concern that

this approach may result in air toxics permits that could be difficult to enforce in court if the affected industry decides to contest a noncompliance decision based on these generic measurement methods. The EPA research group responsible for developing and approving measurement methods has also questioned the effectiveness of this approach. In an internal report, the group notes that generic classes of compounds will contain regulated substances with widely differing toxicities, as well as some unregulated substances. Although this approach has already been used on a limited basis, it has not been tested in court cases involving disputes between regulators and the regulated industry on noncompliance matters, according to EPA officials. For example, in March 1991 the Motor Vehicle Manufacturers Association complained to EPA because no workable measurement methods exist for VOC emissions from automobile paint shops where different coatings are applied in a single paint spray booth. EPA officials say they have few options because, historically, resources have only allowed about three new measurement methods to be validated a year and, as noted earlier, the agency currently lacks methods for nearly 150 toxic air pollutants.

Strategy Does Not Explain EPA's Rationale For Over 750 Categories and Subcategories

Under the 1990 amendments, EPA is required to divide major air toxics sources into categories and subcategories and publish a list of these groups by November 15, 1991, and subsequently, to develop MACT standards for each group. MACT standards may distinguish among class, type, and size of sources within a group. How EPA defines these groups could significantly affect the amount of reductions achieved, and has prompted concern in some quarters. For example, the Executive Director of the State and Territorial Air Pollution Program Administrators/ Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) and the Natural Resources Defense Council's (NRDC) Chief of Air Pollution are concerned that EPA may define these groups too narrowly, thereby resulting in many small groups of homogeneous companies, all with similar air toxics controls already in place. Thus, when the

best-performing companies in each group are identified, their performance will not differ significantly from that of the worst-performing companies. Such decisions can have significant adverse impacts on the MACT floor, or baseline, in EPA's standard setting actions. As a result, these officials are concerned that the resulting standards will only perpetuate the status quo and not result in any meaningful reductions in toxic emissions.

Although the act does not limit EPA's authority to establish appropriate subcategories, it does call for EPA--to the extent practicable--to establish categories and subcategories consistent with the 63 categories of new source performance standards EPA has established over the last 20 years. Nonetheless, EPA proposed 760 subcategories in May 1991. This proposal is over three times the Senate's estimate in October 1990--just weeks prior to the act's passage--that there could be as many as 250 categories and subcategories. Although EPA's current strategy does not explain the agency's basis for the proliferation of subcategories, the EPA Administrator--also in October 1990 just prior to the act's passage--stated in a letter to the Council of Economic Advisors that EPA intended to make maximum use of subcategories in establishing MACT standards. NRDC's Chief of Air Pollution said such omissions from EPA's strategy may adversely impact EPA's efforts to hold meaningful consultations with industry and environmental groups. In fact, in a July 1991 letter to EPA, the NRDC said EPA's proposal for 760 subcategories reflects grossly uneven source category definitions, and calls this EPA proposal excessive, inappropriate, and contrary to the law. EPA officials told us this proposal is currently under review, is still subject to being changed before the final list of source categories is published in November 1991, and may be revised to provide for fewer subcategories.

INSUFFICIENT RESOURCES MAY PREVENT ATTAINMENT OF AIR TOXICS OBJECTIVES

Although EPA requested $7.5 million, or 32 percent more air toxics resources in fiscal year 1991 than it did in 1990, agency documents still call into question whether EPA requested sufficient funds to carry out its air toxics responsibilities under the new act. Because of the magnitude of this shortfall--nearly 50 percent below the amount that agency documents suggest is needed--the timely development of longer term MACT standards, the assessment of non-cancer health impacts, and the timely attainment of other air toxics provisions may be jeopardized.

Requested Resources Appear Insufficient To Fully Implement Air Toxics Provisions

EPA's Office of Research and Development (ORD) is one of two principal EPA offices critical to the timely and effective implementation of the act's air toxics provisions. ORD provides the scientific and technical basis for EPA's regulatory, enforcement, and standard-setting decisions, and is the group within EPA that knows best whether EPA's regulations are scientifically defensible. For Fiscal Year (FY) 1992 this office estimated that $76 million would be needed to fully implement the act's air toxics provisions, but that half that amount--$38 million--would enable it to carry out the high priority activities in Title III. Nonetheless, EPA requested only $13.8 million for air toxics research in FY-1992--less than 20 percent of the research funds this office's budget planning documents indicated were needed. Early funding of air toxics research is important because some data take years to acquire, the act's deadlines are short, and implementing many provisions may be more complex than anticipated. As one EPA memorandum points out, without more research funds, EPA will have to use crude, highly uncertain methods of risk assessment, with the likely result that EPA's regulations will be challenged. Although the consequences of underfunding research are often difficult to

project, EPA briefing documents and other internal memorandums indicate that the 7- and 10-year mandated time frames covering 75 percent of the MACT standards may be missed, that some special studies of emerging environmental issues may be unfunded or underfunded, and that other mandated obligations may be compromised.

A second EPA office--the Office of Air and Radiation (OAR)--is equally important to the timely and effective implementation of the act's air toxics provisions. OAR is responsible for developing and issuing phase one and phase two air toxics standards, overseeing their implementation by EPA regions and state and local agencies, and ensuring that the regulated community achieves and maintains compliance. OAR's activities include setting MACT standards for such entities as chemical plants, incineration units, pharmaceutical manufacturers, and dry cleaners, among others. Information recently provided by EPA indicates that this office's FY-1992 funding shortfall, while still millions of dollars short of the amount it estimated it needed to carry out the air toxics provisions of Title III, may not be as great as was indicated during the course of our review. In January 1991 EPA estimated that OAR would need $81.3 million to implement the President's proposal for Title III. Our review of internal budget documents and discussion with program and budget officials suggested that only $16.8 million was requested from OMB.

The most recent data provided to us from EPA indicates that the total amount of funds for all air toxics-related activities is $66.8 million. Due to time limitations, we were unable to evaluate the appropriateness of all the program activities contained in EPA's revised figure. However, a cursory review of EPA's revised figure raises questions. For example, EPA has included $4 million for mobile source activities although the act provides for the regulation of mobile sources under other Titles. EPA's January 1991 estimate of funds needed to implement Title III recognizes this and does not include mobile sources. Also questionable is the inclusion of $3.9 million for Resource Conservation and Recovery Act (RCRA) efforts when

EPA's August 27, 1990 budget submission to OMB indicated that funding for RCRA-related air toxic activities would be requested in a future year and not in FY 1992. Appendix II presents an analysis of the differences between our report and EPA's recent figures.

Notwithstanding the confusion over the funds requested and devoted to Title III, OAR's FY-1992 budget submittal to the EPA Administrator points out that the air toxics resources requested for 1992--while sufficient to meet the act's early requirements--are not sufficient to address the act's longer term requirements, such as the outyear MACT standards and the phase two health-based standards. According to a February 1991 EPA fact sheet on the new act, the effects of the Fiscal 1992 resource shortfall will be either missed deadlines or products without the full range of technical completeness, and that the adverse impact on EPA's ability to meet deadlines due after 1992 could be significant.

Also, it is worth noting, Mr. Chairman, that the ORD and OAR estimates of amounts needed were not wish lists. As indicated in our report, these estimates reflect EPA air program and research managers' best estimates of the amount required to fully implement Title III as described in the President's proposal. For example, one EPA budget briefing document points out that the estimates have been scrubbed by both ORD and OAR to ensure that the work is needed, the estimated cost is reasonable, and any duplication of effort has been precluded. Additionally, EPA officials said these estimates were conservative, in that they were developed in 1990 prior to the amendments' passage, and do not reflect the added costs of implementing additional requirements --such as the requirement that EPA regulate all 189 toxic air pollutants within 10 years instead of just 50 percent within this timeframe--subsequently added by the Congress during the amendments' development.

Underfunding Could Delay Implementation Of Longer Term MACT Standards

As a result of the shortfall in funding, EPA has decided to direct most of its available resources to meeting the 2- and 4-year MACT deadlines (for 25 percent of all source categories). A July 1990 memorandum from the EPA Assistant Administrator for Air and Radiation to the EPA Administrator pointed out that EPA's fiscal year 1992 budget request would enable EPA to meet the requirement to "regulate 25 percent of the required source categories within four years, but would stretch out the schedule for the remaining categories."

According to the Executive Director of STAPPA/ALAPCO, association members are concerned that EPA may miss some of the MACT standard deadlines. The Executive Director considered this the worst scenario for all parties concerned, because this would mean that 107 state and local agencies would have to individually issue air toxics permits based on what each believed EPA's eventual MACT standards would be. While state and local agencies could normally wait for EPA to act, the so-called hammer provisions within Title III require state and local agencies to individually issue permits 18 months after EPA misses a MACT deadline. Believing that these 107 state and local agencies may vary widely in their respective control decisions, the Executive Director was concerned that (1) state and local agencies would devote substantial resources to establishing individual permit standards that could be overturned by EPA at some future point; (2) industry could spend millions of dollars installing controls and changing production processes that might later have to be abandoned, retrofitted, or redone if EPA's standards were more stringent; or (3) industry may unnecessarily spend considerable sums of money adding controls and changing manufacturing processes, only to subsequently learn that EPA's standards were not as stringent as the state or local agency's interim standards.

Underfunding Could Adversely Impact Long-Term Health Assessments

Several EPA and other officials believe the agency will also have difficulty assessing the health and environmental risks that remain after MACT standards have been adopted and determining whether further controls are needed--this is the second phase of the two-phased approach to controlling air toxics. This opinion is based primarily on their belief that EPA is not funding the necessary research activities to make these outyear decisions. Internal EPA memorandums state that such underfunding is shortsighted, will postpone for years EPA's ability to make phase two residual risk decisions, and may render the agency unable to substantiate proposed standards or survive litigation. For example, a July 1990 EPA memorandum stated that, without funding increases, the agency will have to use highly uncertain assessments of risk that are likely to lead to challenges or inappropriate regulation. Moreover, STAPPA/ALAPCO's Executive Director predicted that EPA's underfunding would delay residual risk assessments from 5 to 20 years beyond the act's deadlines. More importantly, such underfunding may affect public health, since EPA scientists expect 25 to 40 percent of sources to present significant risks of serious disease even after MACT standards are in place. Our follow-up work indicates that the Science Advisory Board is also concerned that EPA is significantly underfunding its research program for making these phase two decisions.

EPA's Reasons For Not Requesting More Funds

According to EPA officials, funding requests take into consideration the amount they anticipate OMB will approve during a tight budget period, as well as other factors, including concern that the agency could not readily accommodate more rapid growth, and plans to offset the current underfunding by larger budgets in future years. For example, EPA officials said they are concerned about their ability to hire, train, house, and effectively use more staff than they have requested in their FY-1992 budget. Also, in their opinion, contract

funds may be ineffectively used unless sufficient numbers of properly trained staff are available to monitor contractor performance. While these are concerns that rapidly growing programs must address, EPA's budget requests have not reflected that such scale-up problems may have constrained the agency's funding decisions.

Additionally, EPA's reliance on large future budget increases to help offset current shortfalls may be unrealistic in view of recent legislation placing a spending cap on discretionary funding of federal programs. Also, EPA's failure to keep the Congress fully informed of its efforts to implement legislation such as the Clean Air Act Amendments of 1990--and the reasons and potential effects of not requesting full funding--limits congressional awareness of key information affecting the timely accomplishment of legislatively established objectives. We are encouraged, however, by EPA's response to our June report. It is our understanding that the agency has agreed to provide the Congress with several scenarios depicting EPA's envisioned progress at various funding levels when requested by the Congress.

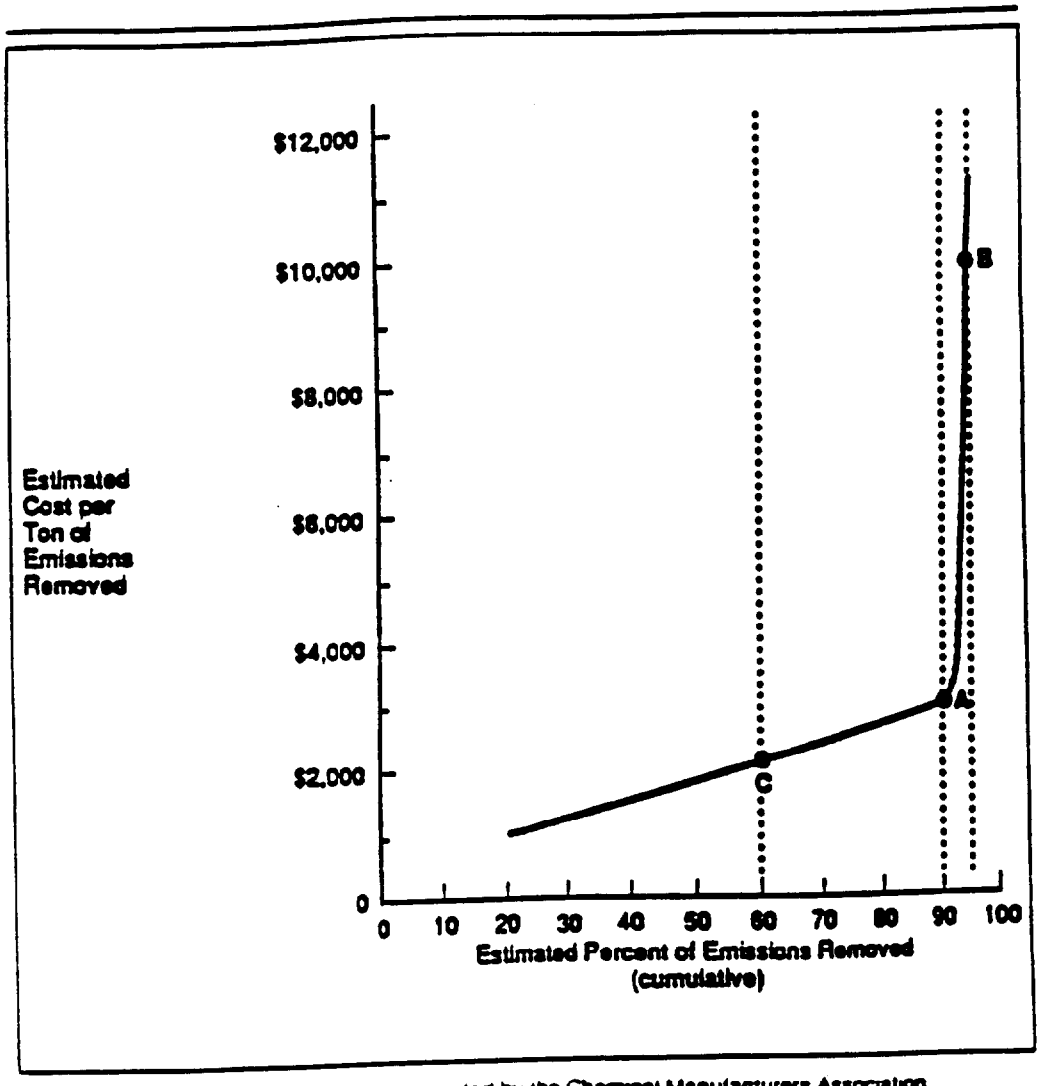
- - - -

In summary, Mr. Chairman, neither we nor EPA are in a position to determine unequivocally whether the agency can compensate for its initial limited budgets through future budget increases. We do know that assessing the impact of EPA's approach on the act's air toxics provisions is more difficult due to the vagueness of EPA's implementation strategy. We continue to believe that the best approach for ensuring EPA's success in carrying out its greatly expanded air toxics activities is a clear and comprehensive strategy describing where the agency is going and how it intends to get there. A strategy that lacks sufficient details on the data needed and the actions, activities, and tasks to be performed provides little assurance of success.

Equally important, in our opinion, are realistic budget requests that would enable the agency to reasonably carry out the Congress' legislative mandates. Realistic budget requests help the Congress debate and set air toxics funding levels appropriately in relation to other national needs, especially during constrained budget periods, whereas unrealistic budget requests may hinder this decision-making process. We continue to believe that our previous recommendations have value--to facilitate decision-making during periods of fiscal austerity, EPA should present the Congress with several scenarios depicting EPA's envisioned progress at various funding levels. While one scenario should be based on sufficient resources for EPA to fully implement the act's mandates, other scenarios could reflect the rate of growth that EPA believes its programs can effectively and efficiently accommodate.

This concludes my prepared statement. We would be pleased to respond to any questions you or other members of the Subcommittee may have.

EXAMPLE OF THE MARGINAL COST-BENEFIT APPROACH



Source: GAO illustration based on data provided by the Chemical Manufacturers Association.

Point "A" represents the cost-benefit approach, whereby the standard is set at the point that control costs escalate exponentially in relation to the emissions reductions achieved; Point "B" represents the affordability approach, whereby industry would be required to use the best controls available, as long as most of the companies in the affected industry group could afford to do so without being forced out of business; and Point "C" represents a set cost approach, whereby regulators are held to a cost ceiling for each ton of emissions removed.

ANALYSIS OF THE CHANGES IN EPA'S FY-1992 ESTIMATES OF AIR TOXICS FUNDS NEEDED AND REQUESTED FOR THE TWO PRINCIPAL OFFICES CHARGED WITH IMPLEMENTING THE AIR TOXICS PROVISIONS OF TITLE III

	(amounts in millions) NEEDED	REQUESTED
Amounts Per EPA Budget Documents and Memoranda Available as of April, 1991:		
ORD	$76.0[a]	$8.6[b]
OAR	$81.3[c]	$16.8[d]
Total	$157.3	$25.4
Percent of Need		16 %
Revised Amounts Supplied By EPA in October, 1991:		
ORD	$76.0[e]	$13.8[f]
OAR	$81.3+[g]	$66.8[h]
Total:	$157.3+	$80.6
Percent of Need		51 %

NOTE: Date, source, and an explanation of the key assumptions associated with each estimate are shown in footnotes below.

[a] July 19, 1990 memorandum from OAR and ORD Co-Chairs, Air Toxics Subcommittee, to OAR and ORD Co-Chairs, Air and Radiation Research Committee (ARRC), page 15. According to this document, $76 million would be needed to carry out the research and development activities associated with implementing Title III as proposed by the President. Also, this amount was presented in a June 21, 1990 briefing of the EPA Assistant Administrator for ORD.

[b] September 17, 1990 Air and Radiation Research Committee (ARRC) budget briefing document for the OAR and ORD Co-Chairs of the ARRC, page 2.

[c] January 15, 1991 memo from the EPA Administrator to Chairman Dingell, pages 4 and 8. According to this document, $81.3 million reflects EPA's estimated cost of implementing Title III as proposed by the President.

[d] February 8, 1991 EPA printout for Budget Code HQ-11A2A, showing FY-1992 Abatement, Control, and Compliance (AC&C) funds requested for

Title III Emission Standards and Technology Assessment. As stated in GAO's report, this amount ($16,753,700) represented the latest funding information available to us at the time of our audit.

[e] ORD officials were uncertain in October 1991 whether this estimate would increase or decrease as they became more familiar with the complexities of implementing Title III.

[f] July 29, 1991 response letter from the EPA Assistant Administrator, Office of Administration and Resources Management, to Chairman Dingell, Attachments XI and XII. About $4.3 million of this amount was from reprogrammings, according to ORD officials. Similar figures presented in an August 27, 1991 memorandum from the Deputy Assistant Administrator, OAR, and the Acting Deputy Director for Modeling, Monitoring Systems, and Quality Assurance-ORD, to Air and Radiation Research Subcommittee Co-Chairs, Attachment I.

[g] As of September 30, 1991, EPA officials recognized that this $81.3 million estimate may be understated, since it does not reflect the costs associated with activities added to the Administration's proposal, including the requirements that EPA (1) issue MACT standards for all 189 listed toxic air pollutants within 10 years rather than only half of this number, and (2) conduct at least 12 studies of emerging environmental issues over the next 2 to 6 years.

[h] On October 29, 1991 EPA officials provided documents showing that $25.7 million was requested for Budget Code HQ-11A2A, the principal OAR office charged with implementing Title III. EPA officials also provided documents showing an additional $41 million was requested for other air toxics-related activities to be performed throughout the agency, bringing the revised total to $66.8 million. Due to time limitations, we were unable to evaluate the appropriateness of all the program activities contained in EPA's revised OAR amount. However, OAR's inclusion of certain program activities calls into question the overall accuracy of this amount. For example, EPA has included $4 million for mobile source activities when the act specifically excludes mobile sources from consideration under Title III. Also questionable is the inclusion of $3.9 million for Resource Conservation and Recovery Act (RCRA) efforts when EPA's FY-1992 budget submission to OMB indicated that resources for RCRA-related air toxics activities would be requested in a future year--not FY-1992.