

**GAO**

Transition Series

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November 1988

# **Environmental Protection Agency Issues**



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GAO/OCG-89-20TR

Comptroller General  
of the United States

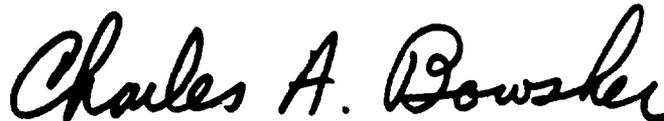
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The President of the Senate  
The Speaker of the House of Representatives  
The Administrator-designate, Environmental  
Protection Agency

This report is one of a series that summarizes major policy, management, and program issues facing agency heads in the new administration. Through our work in these areas, we have identified many concerns—some relatively new, others long-standing.

This report on the Environmental Protection Agency (EPA) describes our concerns about (1) improving the overall management of the nation's environmental protection efforts (on the basis of the results of our general management review of EPA completed in August 1988), (2) improving the management of hazardous waste and the cleanup of abandoned waste sites, (3) creating a new policy to reduce ozone levels, (4) focusing increased attention on pesticide health and environmental assessments, and (5) developing a more comprehensive approach to cleaning up the nation's waterways. We also offer a wide range of observations and suggestions on how the Administrator of EPA can best address these concerns.



Charles A. Bowsher

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# Improving Overall Environmental Program Management

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Significant inroads have been made over the past 20 years in addressing a host of environmental problems that have plagued the nation. However, environmental inquiry continues to identify additional threats to human health and the environment, such as indoor radon and stratospheric ozone depletion. And, it becomes increasingly evident that solutions to such problems are more complex than initially envisioned. Better management of the nation's environmental programs, requiring the efforts of both the Environmental Protection Agency (EPA) and the Congress, will be needed to meet the challenges in the years ahead.

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## Focus on Measurable Results

The nation's environmental programs must be managed with greater emphasis on achieving measurable environmental results.

Although managing for measurable environmental results is an agency goal, EPA has not operated in this manner. Generally, it measures success in terms of accomplishing program activities, such as the number of inspections performed or enforcement actions taken against facilities required to comply with environmental regulations. EPA does not, however, take the additional step of linking the results of these activities to changes in

environmental conditions. Without an environmental results-oriented focus, it is difficult to evaluate the impact that EPA programs and other initiatives are having in correcting environmental problems.

In order to manage for environmental results, EPA needs to

- emphasize environmental monitoring to develop better information on current and future environmental conditions and
- undertake and/or expand research to determine the environmental dangers and health risks posed by various sources of pollution.

EPA also needs to implement a multimedia approach in monitoring and evaluating changing environmental conditions. Traditionally, environmental programs have been crafted and managed along specific media lines—air, water, hazardous waste—with little emphasis on the pollutant relationships among media. This approach hinders efforts to develop environmental information from a multimedia perspective. Such a perspective is needed, for example, because efforts to improve the quality of the nation's waterways may be dependent on reducing air pollutants contributing to the formation of acid rain

that may later fall into rivers and streams. In establishing environmental results measures, EPA needs to determine the interrelationships among media and employ multimedia environmental monitoring to capture the results of the nation's environmental initiatives in a more comprehensive manner.

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Link Goals to  
Planning, Budgeting,  
and Financial  
Management  
Systems

Results-oriented environmental goals should be ranked in order of priority and become the basis for EPA's planning and budgeting activities, as well as be linked to EPA's financial management system.

Currently, EPA's planning function is not well linked to its budgeting process; therefore, there is no assurance that resources will be allocated in a manner consistent with program priorities. Our general management review of EPA indicated numerous cases in which items included in the agency budget did not reflect priorities established through the agency's planning system. Multimedia considerations also need to be reflected in the budget development because, for example, improvements in water quality may depend on initiatives to control surface water runoff from hazardous waste disposal sites.

EPA is currently developing an integrated financial management system that also

should be linked to its planning system. EPA should provide sustained leadership and maintain a high priority for this undertaking because of the potential problems in developing financial management systems.

The Congress recently required annual audits of two major EPA programs, and we initiated a comprehensive audit of EPA's financial statements in June 1987. Such efforts should provide the Congress and the public with the financial information necessary for responsible oversight.

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Develop a More  
Effective EPA-State  
Partnership

A new EPA-state partnership is needed for carrying out the nation's pollution abatement efforts.

EPA is held accountable to the Congress for managing the nation's environmental activities; however, most program implementation activities are carried out by the states, with funding and oversight provided by EPA. Many states want increasingly more independence, maintaining that too much of their time is consumed in responding to EPA oversight requirements. Their performance varies considerably, however, which limits the amount of autonomy that EPA has allowed.

Recertification, an approach in which EPA would periodically conduct comprehensive evaluations focusing on results-oriented achievements, would give states more implementation responsibility and allow them to concentrate more resources on correcting actual pollution problems. This approach would also provide periodic opportunities for EPA to assure itself that the states are carrying out the nation's environmental programs effectively.

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# Managing Hazardous Waste Programs Better

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Programs to control currently generated hazardous waste and to clean up waste from old, inactive waste sites have not been well managed. Progress has been limited, and accomplishments have fallen short of expectations in both the private and federal sectors.

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## Improving Focus and Direction of Today's Hazardous Waste Program

Problems in dealing with currently generated hazardous waste underline the need for improved program focus and direction.

EPA has made limited progress in

- determining which wastes are hazardous and need regulating and
- getting hazardous waste handlers to comply with regulatory controls.

EPA does not know whether it has identified 90 percent of the hazardous waste that needs to be regulated or only 10 percent. This uncertainty is due to EPA's lack of focus and changing approaches in its waste identification efforts.

We have issued several reports that show widespread and persistent noncompliance with hazardous waste regulations, such as ineffective groundwater monitoring for hazardous waste facilities. EPA estimates that about half of the 5,000 facilities that

treat, store, or dispose of hazardous waste may require action to clean up and correct existing deficiencies at a cost of more than \$22 billion. One reason for the lack of success is not holding enforcement officials accountable for attaining compliance. Additionally, we have reported that EPA has made limited progress in getting generators to reduce the volume and toxicity of hazardous waste being produced nationwide.

We recommended in 1988 that EPA establish specific, measurable, long-term goals for its waste management program and strategies for accomplishing them. To ensure that congressional intent is not overlooked in the process, EPA should consult with the Congress in developing its strategies and periodically report back on its progress in achieving its goals.

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Improving  
Superfund's  
Management  
Strategy

EPA needs to develop a more effective strategy for its Superfund program that ensures that sites are cleaned up as quickly as possible and that responsible parties bear their fair share of the cleanup costs.

The cleanup of old, inactive hazardous waste sites under Superfund has been slow, and the potential extent of contamination may have been underestimated. As

of September 1988, EPA had identified more than 29,000 sites nationwide that could require cleanup under Superfund; we have estimated that as many as 425,000 sites may exist. Of the approximately 9,000 sites it has inspected, EPA believes that 1,177 should receive priority cleanup attention.

Cleanup work, funded mostly by EPA, has been started at 201 of the 1,177 sites and has been completed at only 27. Thus far, EPA has obligated about one-third of the funds (approximately \$3.5 billion of \$10.1 billion) authorized to clean up sites when private parties responsible for the contamination are unwilling or unable to do so.

The program has come under fire from many sources who have complained that

- EPA's process for assessing pollution and designing cleanup remedies at sites is too time-consuming,
- federal money is being spent unnecessarily because EPA has not aggressively pursued responsible private parties to pay cleanup costs, and
- the few cleanup remedies EPA has selected do not ensure that the threats posed by

contaminants will be eliminated permanently.

We have reported that EPA needs to strike a better balance between assessing and cleaning up existing sites and ensuring that reasonable efforts are being made to uncover, inventory, and assess potential new sites. We have also reported that EPA has not sufficiently controlled the costs of contractors who do most site assessments and devise cleanup strategies for EPA and that EPA's Superfund work force is inexperienced and employee turnover high. In view of these problems and the progress made to date, it is doubtful that the Superfund program, as currently operated, will ever achieve the cleanup of all hazardous waste sites.

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Encouraging Federal  
Sector Compliance

Federal agencies should set the example for hazardous waste management.

The federal sector, which might be expected to be a model hazardous waste manager, has, in fact, been slow to comply with regulatory requirements. In a 1986 review of federal facilities that handle hazardous waste, we found that at least half of the facilities inspected had violated hazardous waste regulations; some were out of compliance for more than 3 years.

In addition, 62 federal facilities have been included on EPA's Superfund list of priority sites for cleanup. A congressional timetable for federal agency action has prompted the agencies to begin work; however, most are still in the very early stages of the cleanup process. Although the extent and costs of federal facility cleanup have not been fully determined, they could be substantial. Estimates put costs as high as \$14 billion at the Department of Defense and \$65 billion at the Department of Energy.

A major stumbling block that has slowed federal sector compliance is EPA's inability to require other federal agencies to comply with hazardous waste regulatory requirements. The administration has not given EPA the authority to direct other federal agencies to meet regulatory requirements. Several pieces of legislation that would have expanded EPA's authority in this area were considered, but not enacted, by the 100th Congress.

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Evaluating Threats  
From Nonhazardous  
Waste

EPA needs to increase its evaluation of nonhazardous waste to determine what actions are necessary to protect human health and the environment, and the Congress and administration need to determine what the federal role should be in the control of nonhazardous waste.

Mounting evidence indicates that wastes currently considered nonhazardous—such as medical, household, and municipal wastes—the disposal of which is not federally controlled, may not be adequately managed to protect the public and environment. For example,

- some of today's Superfund sites include landfills that have accepted municipal waste, and
- EPA's study of 6,000 municipal landfills shows that such landfills do pose environmental threats, such as contaminating groundwater.

Medical waste washing up on our nation's beaches raises serious questions about the regulation of these wastes, which is currently left to the states.

Issues the Congress and administration will have to address include

- the dangers posed by nonhazardous wastes and waste sites,
- the regulations necessary to protect human health and the environment, and

- the impact that increased EPA nonhazardous waste responsibilities will have on current EPA resources devoted to hazardous waste.

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# Creating a New Policy to Reduce Ozone Levels

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A new ozone policy is needed for reducing ground-level ozone to environmentally safe levels.

While progress has been made in reducing ozone levels, most metropolitan areas have yet to meet the national safe ozone level established by EPA. In fact, about 75 million people live in areas in which the amount of ground-level ozone—a key ingredient of smog—is considered unsafe for human health and the environment. Some areas, such as Los Angeles, reach levels as high as two or three times the safe level because of large populations, industries, and weather factors that are conducive to ozone formation.

EPA requires localities that have not attained the safe ozone level to establish control measures to reduce pollutant emissions that contribute to the formation of ozone. In some areas, planned reductions have failed because

- the required control measures were not implemented,
- the measures implemented were not enforced, and/or
- such measures were not as effective as envisioned.

Some states and localities find it difficult to reach a proper balance between the environmental benefits of ozone reductions and the economic and lifestyle changes necessary to achieve them. Such changes include reducing automobile use or operations at manufacturing plants to limit the pollutants that contribute to ozone formation. Also, ozone reduction measures are costly; EPA estimates future nationwide costs could reach \$10 billion annually.

The Congress extended its deadline for attaining the safe ozone level from the original deadline of 1975 to 1982 and allowed additional extensions possible to 1987. It also established economic sanctions that could be imposed on areas not meeting the extended deadline, such as a ban on construction of facilities that would be major contributing sources of ozone pollution. The use of sanctions, however, has been controversial, and on two occasions the Congress prohibited EPA from applying them.

In amending the Clean Air Act, the Congress has yet to reach a consensus on such issues as

- the additional time that areas will need to reach attainment;

- additional control measures that should be mandated at a national and/or local level; and
- economic penalties, such as withholding highway funds, that could be imposed against areas that do not make reasonable efforts to control ozone.

In the absence of congressional direction, EPA has proposed a post-1987 policy that would, among other things, extend the ozone attainment deadlines, waive certain economic sanctions, and continue use of other sanctions. Although EPA's actions are understandable, we do not believe that it has the legislative authority to carry them out.

As we recommended in a January 1988 report, the Congress needs to develop, with EPA's input, a legislative framework that

- establishes a strategy that places localities into different categories on the basis of the severity of their ozone problem and sets new attainment deadlines for each category and
- specifies the conditions under which sanctions will apply and the extent to which

EPA has discretion in applying such sanctions.

EPA then needs to strengthen its oversight procedures to make sure this policy is implemented. Without such action, the prospects for making significant inroads against the ozone problem are not very encouraging.

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# Focusing Increased Attention on Pesticide Health and Environmental Assessments

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Increased management attention needs to be focused on EPA's program to assess the long-term health effects of the 50,000 pesticide products currently available for public use.

Most of the approximately 50,000 pesticide products licensed for sale on the open market have not been assessed to determine their long-term health effects on human health and the environment. EPA's program to assess these products, which was launched in 1972, has not produced the results that were initially envisioned. Currently, only 11 of 600 active ingredients used in pesticides (the chemical that kills or controls a pest) have been assessed. At this pace, estimates are that an additional 30 years would be needed to complete the process.

However, the Congress, through 1988 amendments to the Federal Insecticide, Fungicide, and Rodenticide Act, has refocused EPA's assessment program. EPA has been given additional funding for conducting assessments and 9 years for completing the task.

Because EPA has not been successful in meeting deadlines or implementing pesticide reforms in the past, extraordinary

leadership is needed to meet the congressional mandate. To effectively implement the accelerated assessment program, EPA needs to, among other actions,

- concentrate on meeting each deadline in the act as it comes due rather than the final 9-year deadline (once intermediate deadlines are missed, it will be nearly impossible to make up the lost time, given prior agency performance);
- hire and train high-caliber staff to review the volume of industry-submitted health and environmental studies that will be needed to make regulatory decisions on each pesticide ingredient; and
- establish quality controls to ensure that industry-submitted studies are reliable, valid, and complete and that EPA's audits and scientific reviews and assessments of the studies are independent, thorough, and accurate.

Several complex and controversial issues that remain unresolved will challenge EPA's best leadership. Among the issues yet to be resolved are

- determining the synergistic effects of combining more than one active ingredient in a product (EPA is generally only assessing

the health effects of individual active ingredients);

- assessing the health and environmental effects of about 1,200 inert ingredients in pesticide products that propel, dilute, or stabilize the active ingredients (EPA has only just begun work in this area); and
- whether, and how, the public should be informed about which products have been fully assessed for long-term effects (EPA has not addressed this issue at all).

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# Developing a Comprehensive Approach to Control Surface Water Pollution

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A more comprehensive approach to controlling surface water pollution that recognizes nonpoint sources of pollution as well as point sources is needed to improve the quality of the nation's waterways.

Billions of dollars have been spent to reduce point-source water pollution (pollution from a specific point of discharge) from municipal sewage treatment plants and industrial plants. Yet states continue to identify significant portions of waterways that are still not fit for designated uses such as swimming and fishing. Current thinking is that even if further improvements occur in point-source controls, pollution from nonpoint sources (no specific point of discharge) would still leave many of our lakes, rivers, and streams polluted.

Pollutants from nonpoint sources now represent the major environmental threat to the nation's surface waters. Examples of nonpoint sources include farmlands, mines, or streets from which runoff caused by rainstorms can carry pesticides, oil drippings from vehicles, and other harmful substances into our waters.

Because nonpoint source pollution can occur anywhere along a body of water, it is very difficult to identify its point of

entry. The best solution is to prevent or limit it from reaching the water through proper land management techniques, such as terracing farmland on a hillside to limit the runoff of pesticides into a stream.

Available information shows that identifying and controlling runoff are possible. Moreover, the results of one study of a particular reservoir suggest that in certain situations it may be less expensive to control nonpoint sources than to adopt additional point-source controls. In response to this study, local governments developed a comprehensive approach to controlling both point and nonpoint sources that is expected to ensure environmental progress while allowing for economic growth.

The Congress and EPA have provided limited funding for controlling nonpoint sources. Currently, no estimates exist on the potential cost of a comprehensive national program that recognizes the need to control nonpoint sources as well as point sources of pollution. Costs to collect and treat storm water runoff from urban streets, for example, could be substantial. On the other hand, nonpoint source control may be the only alternative to deal effectively with many of our remaining heavily polluted waters.

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# Related GAO Products

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General  
Management

Environmental Protection Agency: Protecting Human Health and the Environment Through Improved Management  
(GAO/RCED-88-101, Aug. 16, 1988).

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Hazardous Waste

Hazardous Waste: New Approach Needed to Manage the Resource Conservation and Recovery Act (GAO/RCED-88-115, July 19, 1988).

Superfund: Extent of Nation's Potential Hazardous Waste Problem Still Unknown  
(GAO/RCED-88-44, Dec. 17, 1987).

Hazardous Waste: Federal Civil Agencies Slow to Comply With Regulatory Requirements (GAO/RCED-86-76, May 6, 1986).

Superfund: Civilian Federal Agencies Slow to Clean Up Hazardous Waste  
(GAO/RCED-87-153, July 24, 1987).

Superfund Contracts: EPA Needs to Control Contractor Costs (GAO/RCED-88-182, July 29, 1988).

Superfund: Improvements Needed in Work Force Management (GAO/RCED-88-1, Oct. 26, 1987).

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Air

Air Pollution: Ozone Attainment Requires Long-Term Solutions to Solve Complex Problems (GAO/RCED-88-40, Jan. 26, 1988).

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Air Pollution: Efforts to Control Ozone in Areas of Illinois, Indiana, and Wisconsin  
(GAO/RCED-88-46BR, Jan. 29, 1988).

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Pesticides      Pesticides: EPA's Formidable Task to Assess and Regulate Their Risks  
(GAO/RCED-86-125, Apr. 18, 1986).

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Water      Water Pollution: Efforts to Clean Up Michigan's Rouge River (GAO/RCED-88-164, Aug. 10, 1988).  
  
The Nation's Water: Key Unanswered Questions About the Quality of Rivers and Streams (GAO/PEMD-86-6, Sept. 19, 1986).

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