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Streamlining the regulatory effort

DOUGLAS M. COSTLE
Administrator

President Carter's message to the nation on inflation set an important new course for the nation's economy.

Prior to his national address, the President asked the regulatory agencies to develop recommendations for improving management of the entire—and somewhat fragmented—federal regulatory system. These agencies jointly proposed the formation of a council which would analyze and better manage aggregate regulatory economic impacts, hold all agencies accountable for the results of their decisions, and also allow agencies to freely and openly pursue the regulatory task assigned them by Congress.

In my role as Chairman of the Council, I have already concluded—in discussions with my colleagues in other agencies and departments—that there is a very serious determination throughout this administration to make regulation more effective; to eliminate unnecessary economic and administrative burdens; to do away with duplication, overlaps and inconsistencies; and to accelerate our efforts to carry out more effective research, regulatory development and enforcement.

I think you will find some significant new approaches in our regulatory agencies—a greater emphasis on the big problems and on the setting of priorities; a pruning of the undergrowth of regulation which has sprung up over the years, often obscuring the total landscape of purposes and objectives.

The President reminds those of us in government that we are a community of interests, that sometimes individual sacrifice is necessary for the greater good of the nation. In some of our regulatory activities we have lost that sense of community. We have sometimes hidden the broader perspective behind a more narrow expediency. The Regulatory Council will attempt to restore that perspective, that sense of community. It will attempt to rationalize the complete body of government regulations.

That does not mean we will go through the regulatory calendar like a thresher, throwing out regulations by the bushel, or even by the peck. Nor does it mean that the door is open to a challenge of every regulation that may seem individually burdensome. It does mean a careful, studious examination of the total regulatory agenda.

More specifically, the Council will:

- Develop a regulatory calendar for major (costing over $100 million) regulations, and update this document on a semiannual basis;
- Identify and seek to eliminate duplication, overlap and inconsistencies among regulations proposed by the various agencies;
- Seek areas where cooperative efforts will be beneficial, such as common data bases or joint economic studies;
- Identify areas of the economy which may be particularly affected by agency regulations—combined or individual—and work together to help minimize the impact;
- Identify areas for potential joint development of regulations; and
- Make recommendations to the Council members and to the President regarding desirable changes in regulatory programs which may resolve difficult issues.

On its own, EPA has continued to take steps to overhaul its standards and regulations in an attempt to make them compatible with America's economic goals.

The Agency has proposed revised conventional water pollutant standards for 36 industries under authorization of the 1977 Clean Water Act. The changes were proposed in light of the fact that: (1) the affected (primarily food processing, glass manufacturing and ferroalloy) industries were already cleaning up 98 percent of their discharges; (2) left as they are, the current standards would force these industries to spend roughly the same amount to clean up the remaining two percent of the pollution at an estimated $200 million, and; (3) the revised standards would not result in any significant adverse water quality impact.

After reviewing recent scientific evidence on the health and welfare effects of photochemical oxidants (smog), EPA in June proposed to adjust the ambient air quality standards set in 1971 for this pollutant. Reevaluation of the evidence indicated the incidence of asthmatic attacks is greater above 0.25 parts per million (ppm) than below. EPA's proposal, while still retaining the legal "margin of safety" requirement, would change the standard from 0.08 to 0.10 ppm and would probably save business and industry millions of dollars.

The EPA's new standards for airborne lead also call for the agency to work closely with states and affected industries to develop plant-by-plant monitoring and compliance programs. While airborne lead must be curtailed, we do not believe that a major disruption of the smelting industry is an acceptable consequence. At the same time, such a one-on-one approach as mentioned above will enable EPA to better illustrate its concerns over the economic impact of its regulations.

And the EPA has instigated other regulatory reform

measures, both procedural and substantive in nature. Proposals to revamp the administrative hearing process under the Clean Air and other Acts—which could save industries some 30 percent in time delays and hearing costs—have been put forth. EPA has begun a thorough overhaul of regulations dealing with the processing of permit applications under the Clean Air Act, the Clean Water Act—under all federal laws forming the foundation upon which the Agency bases its rules and regulations. These proposals, which have been developed with business and industry assistance, should save time and money for both government and industry.

While the EPA will continue to concern itself in part with the economic impact of its decisions, it will also continue to follow its Congressional mandate for environmental protection. The federal legislature has assigned the Agency with this task, and the American people are increasingly embracing a stronger concern for environmental quality improvements.

Recent public opinion polls exemplify the public's concern with environmental pollution problems. An average of 66 percent of those polled in a July 20, 1978 Harris Survey cited air pollution by industry, the pollution of lakes and rivers with toxic substances and other pollutants, and pollution by chemicals as "very serious environmental problems." Still another survey revealed that 76 percent of all Americans feel that curbing air and water pollution is very important to improving the quality of life in this country, up from 68 percent last year.

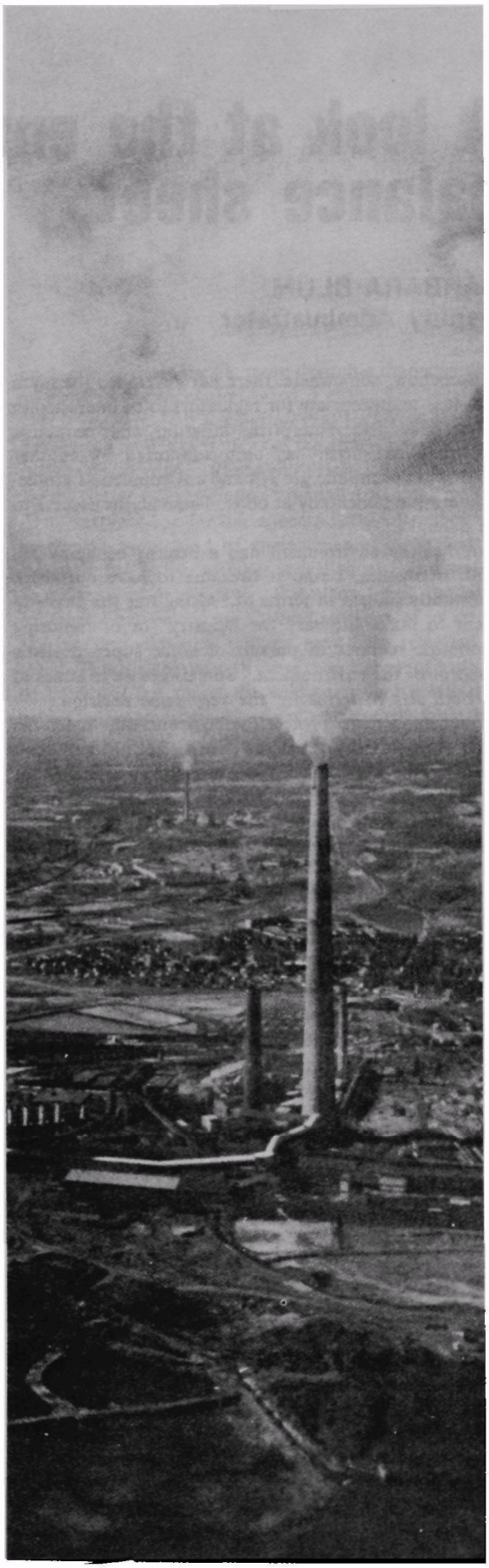
Even where their pocketbooks are affected, Americans are still firmly in favor of environmental progress. One survey by a major polling organization last year found a 68 percent majority willing to pay higher taxes and prices for environmental protection.

And while increased government spending is obviously not a popular subject right now, polls indicate that not enough is being spent on environmental controls; a majority of Americans—52 percent—feel the government is spending too little. That figure is up from 47 percent last year. Even in California, where voters started a political storm by passing Proposition 13, citizens there also passed a $375 million bond authorization measure promoting water pollution control, reclamation and reuse.

The EPA is well aware of the economic impact of its many regulations and, as noted above, it is attempting to reduce some of the impacts when leeway is both deemed environmentally sound and allowable under the law. At the same time, the Agency is well aware of what Congress has ordered it to do, and it is well aware of the public cry for a cleaner environment. It will continue to do its work with these concerns in mind.

EPA must, as is its mission, enable the public use of the environment without allowing the environment to be "used up" and rendered useless for all. There are economic incentives for this also.

Americans have indicated their support for environmental objectives. But they remind us that we must pursue those benefits at reasonable costs.



A look at the environmental balance sheet

BARBARA BLUM
Deputy Administrator

Somehow, somewhere, there has developed the myth that it is inappropriate for regulators to be interested in things like free enterprise, inflation and economic growth. That myth has been supported by another myth: that economic growth and environmental protection are fundamentally at odds. These myths deserve to be debunked.

A healthy environment and a healthy economy are both necessities. I find it tiresome to have our work constantly judged in terms of "selling out the environment to make life easy for industry" or of "ignoring economic realities in pursuit of some super-idealistic concept of the environment." Sometimes we're attacked in both sets of terms for the very same decision.

We are here to protect the environment, under the terms of laws signed by both Republican and Democratic Presidents. We are here to uphold our duties under those seven laws at a minimum level of interference with business, industry, local government, state government and everyone else the law tells us to regulate.

We don't feel that there is an either-or relationship between sound economics and the environment, that pollution is free and cleanup is costly. We don't think that when industries polluted the Cuyahoga River so thoroughly that it could catch on fire there was no cost to the people of Cleveland, even if the pollution was accomplished at next-to-no cost by the dumping industries. We don't think that there is no cost to the people of Gary, IN when United States Steel pollutes the air. Yet neither do we think that there is no cost to Gary when United States Steel shuts down.

There are costs in cleaning up the environment, but there are severe costs for economists to measure in public health when pollution continues.

We can reasonably hope that some day the counterparts of the economists who are so quick to figure the cost of pollution control will learn to calculate the cost of the public health menace of leaving things alone. Yet I'm not sure that we will ever be able to put a price tag on the ability of a father in Cleveland, Detroit or Chicago to take a child fishing.

We think that it is possible to clean up the environment and do it in a way that avoids unnecessary costs, and in a way that takes into account the difficulties that the sudden changes or adjustments compelled by environmental laws impose. We don't want to put companies out of business, because we don't want people to lose their jobs.

However, we don't want to be used as an excuse for second-rate management, either. We don't want to be blamed for some company's distress because we seem like an easier target than the Japanese, the unions, changing consumer tastes, or just a plain old-fashioned failure to keep up with the industry.

There may be no alternative for the cost of a scrubber that removes emission from a power plant smokestack but, from a regulatory perspective, there is plenty of alternative for seven forms when one will do.

Regulatory reform is one of our major interests at EPA, from shortening the time for various actions, to making English the official language of EPA. One effort we made that has attracted some favorable attention lately—even from such a critical observer as James J. Kilpatrick—has been the changes in the way we issue pollution control permits.

In September we announced new procedures that will take some of the uncertainty and some of the cost out of obtaining all the different pollution control permits required to build a new plant or factory. There are several elements in this plan, and they include a single individual in each Regional Office charged with shepherding the various applications through the bureaucratic maze. We're working to develop a single application, even if the terms of the different laws do prevent us from developing a single permit covering water, air, solid waste and everything else.

What may be even more important than the substance of these changes is the way that we got there. We didn't start with a blinding flash of inspiration at Headquarters. This process started when Bill Dodge, the environmental control manager at Caterpillar Tractor, wrote us a letter outlining some of the problems and uncertainties in the way we did our business. At least theoretically, a company could invest millions of dollars in a new factory before learning that the permit which-took-the-longest couldn't be issued.

We thought Bill Dodge made sense. We got him together with other industry representatives, with leaders of environmental organizations, and with the people in our Agency who write and administer the procedures, and we worked together to eliminate pointless costs.

Looking—again with industry and environmentalists' cooperation—at a series of reforms we group together as "regulatory market strategies," we recognize that not all methods of controlling pollution are created economically equal, and that a more flexible approach

may get as much or even more pollution control at less cost.

The potential applications of these strategies include "banking" of pollution control in excess of requirements for later use in plant expansion, various possible ways of trading or selling such accomplishments, and the bubble concept, under which the pollution from an entire plant instead of each individual process is measured. These approaches could enable the operators of a plant to decide, for example, if it is cheaper to control one pollution source drastically and another lightly, instead of controlling both moderately. We think that we can make regulation cheaper, thus making cleaning up the environment cheaper.

We're at work on a major effort to learn what we have gained from several years of pollution control efforts. Specialists within the Agency are at work on a series of environmental indices which should, when fully developed, tell the American people what they are getting in exchange for the time, trouble and money that have been expended on behalf of a clean environment. Publication of these reports has already begun in our northwest Regional Office; and we are pushing ahead with national measurements.

Another major emphasis in our work will be a much heavier investment in research to determine as precisely as possible the public health impact of various pollutants and levels of pollution. For some elements of our basic legal charters, such as automobile emissions, Congress set a specific standard. For many others, it left the job of deciding what was an "ambient" and "hazardous" standard up to us. We are going to be putting more money and more effort into health effects research on those issues.

Our duties in regulating toxic chemicals will require us to regulate specific products, rather than overall levels of pollution, as the general focus of the Clean Air and Clean Water Acts has compelled us to, and this plainly requires an expanded research effort to know how dangerous any particular chemical may be.

Any time we can deal with an issue or a problem before us in a way that will save time, money and jobs for the American economy, but will not threaten the environment, we intend to do so. This is our position, because we do not want pollution control to be a burden that is resisted. Money saved by reducing unnecessary regulation means more money available for more pollution control, for modernization of plant and equipment, for holding prices down, for dividends for stockholders. Each one of those uses is more desirable than spending on unnecessary regulation.

It is the same self-perception that led us to work on developing an urban policy for the Environmental Protection Agency, and to join enthusiastically in developing the Carter Administration's overall urban policy. The simple explanation for our concern is that the worst examples of every kind of environmental insult can be found in the cities, whether it is bad air, foul water, waste disposal or whatever. For many years, the environmental movement has focused so much of its attention on the wilderness that we have been regarded as elitist. This is a charge with more than a grain of truth to it. EPA will not forget the wilderness, but it is in the urban environment that people, particularly inner-city people, are our most endangered species.

There are several concrete ways in which we, at EPA, can help the nation's cities. The various offset policies I discussed earlier will have their primary impact in areas where the air is already bad, so that they will help preserve the possibilities of economic growth.

We are concerned that our sewage treatment grants have encouraged a suburban sprawl that has stimulated inefficient use of resources. We are now seeking to use those grants to encourage more sensible use of sewage treatment funds. We think of this policy as another constructive approach to the economy. Consider tax dollars alone, for a moment, of permitting our cities to fall apart and our inner-city residents compared to suburbanites to suffer from 50 percent higher levels of hypertension, heart disease, chronic bronchitis, emphysema, sight and hearing impairment, cancer and congenital anomalies. This is a social waste—far more serious than unnecessary paper work imposed from Washington.

Our primary concerns are environmental, not economic. If there is no alternative between closing down a polluting factory and continuing an illegal level of pollution—a level prohibited by an act of Congress—we will have that factory closed down.

But we do not believe that extreme case is typical or even frequent. We think that we can work with industry, and with environmental organizations, for a healthy environment, and a healthy economy.

EPA's share in the regulatory reform program

WILLIAM DRAYTON, Jr.
Assistant Administrator
for Planning and Management

As part of his anti-inflation program, President Carter has established a Regulatory Council to manage the federal government's overall regulatory program.

In this interview, William Drayton, Jr., EPA Assistant Administrator for Planning and Management, discusses the Agency's continuing efforts to improve its regulatory process and the role of the Regulatory Council, chaired by EPA Administrator Douglas Costle.

Q. In simplest terms, what does regulatory reform mean at EPA?

A. It means finding ways to do our job better—more surely, with more careful balance, quicker and more economically. Regulatory reform helps everyone. Getting a pound of pollution out for 50 cents rather than a dollar helps the environment as much as those we regulate: it makes it easier to get more pounds out. Taking away the advantages of noncompliance that the small minority of scofflaws have traditionally obtained by violating the law, as we are doing with our new economic charges for noncompliance, removes the economic incentive that encourages noncompliance, reduces the Agency's and the states' administrative costs, and protects the scofflaws' complying competitors from unfair competition. A simpler, less legalistic hearing process helps everyone get to more sensible decisions with less effort and cost.

Q. How does this tie in to the new Regulatory Council?

A. President Carter wants all federal regulatory agencies to adopt such a streamlining policy; he's asked the Council to help him in this regard.

Q. Is the principal purpose of the Regulatory Council to keep regulations from being written?

A. No, absolutely not. The President created the Council chiefly because he wanted his regulatory managers to help him manage the government's overall regulatory program. Regulation has grown very rapidly over the last decade. Until now it has been run in tiny pieces. There are over 100 federal organizations in the regulatory business. We haven't had an overall picture of what we're doing, and efforts to make the pieces fit together have been, by and large, weak and inadequate. Since the Carter Administration began, the regulatory agencies have been trying to work together more and more. For example, EPA has cooperated with the Consumer Product Safety Commission, the Occupational Safety and Health Administration, and the Food and Drug Administration to do a better job of regulating toxics, a critical field where their responsibilities interrelate.

The Council is the logical next step. It will develop a calendar laying out all the significant regulations being developed around the government; using this overview, it will spot overlaps, conflicts, and opportunities for collaboration and efficiencies. Then, led by the Council, the affected members will form work groups to take appropriate action. Because the Council and its chairperson report to the President and will meet regularly with him, it will provide him with the mechanism he needs to manage his regulatory establishment more effectively. This whole approach is a good example of his management style—active, direct, sophisticated, even when dealing with something as complex as Federal regulation, and reliant on his line management team.

Q. Who will participate in the Regulatory Council?

A. All of the Executive Branch Departments and Agencies with major regulatory responsibilities, sitting in their capacity as regulators. Independent regulatory agencies (e.g., the Consumer Product Safety Commission) have also been invited to participate in the Council's work, and we expect most of them will.

Q. Will the Council be able to veto regulations?

A. No. It has no legal authority to do so. It can help the member agencies to recognize problems for those being regulated and can recommend ways of avoiding those problems. It does, however, have the specific authority to recommend that its very interested boss, the President, take action.

Q. What yardsticks will apply in judging regulations?

A. There are a number of yardsticks: importance of the public benefits achieved, energy efficiency, direct and indirect costs, whether or not there are more promising alternatives, impact on the distribution of goods and service, administrative feasibility, whether or not the proposed regulation can be enforced easily, legality and others. We must weigh costs against benefits carefully, even while recognizing that such analysis can only help, not replace judgment. What is the value to society of a life, or illness, or clean air and water? There is no simple regulatory "go/no go" formula. But we can do a much better job of underpinning judgment with disciplined analysis. EPA and the Council will press the development and application of those methodologies.

Q. Which is more important, controlling inflation or cleaning up the environment?

A. They are both important, and by and large these two objectives do not conflict. As long as the benefits of

environmental regulation—ranging from fewer deaths and illnesses through increased crop yields to the freedom to swim or fish on the river next door—exceed the costs, environmental regulation leaves society richer on balance than it would be without regulation. This is anti-inflationary. That's one of the reasons the public continues to advocate more spending on environmental cleanup (60 percent of those polled), not less (7 to 10 percent). People are pretty smart. They know environmental regulation is a bargain. The public's judgment is supported by the studies we and others have done.

EPA was created to correct a massive market failure. It has made our peoples' lives safer and happier; i.e., it has made our economy much more efficient. That is not to say that we can't achieve those objectives more efficiently. We can and, through our regulatory reform program, are trying to do so. Every such improvement we make helps in the fight against inflation.

Q. What is known about the cost of all government regulations?

A. Unfortunately, very little. Some agencies may have identified the cost and impact of their own regulations, and some academic studies have taken a stab at overall estimates of cost, but no one has thoroughly, systematically compiled all regulatory costs or their effects on inflation. The Regulatory Council is going to attack this problem. It's going to be a very tough job. We should not expect too much too soon.

Q. Is the public willing to pay for environmental cleanup now that it's so costly?

A. I believe the public is willing to pay if the costs are reasonable. The polls consistently show that people are willing to pay for the cleanup. But the polls also show that inflation is the number one concern among our citizens. I think this calls for the approach we are taking: cost-beneficial regulation.

Q. What compromise is EPA willing to make to combat inflation?

A. It is not necessary to compromise our basic goals or objectives. We will continue to try to regulate in the spirit that our job, representing the President, is to try to make the same sort of balanced judgment the public would if it had the time to master all the technicalities. We actively try to balance costs and benefits as best we can. We have, for example, cut back several air and water standards that, on review, seemed to impose excessive cost—saving over $1 billion.

Q. What is the Regulatory Council's agenda?

A. Its first order of business will be to prepare, by February 1, 1979, a calendar that lays out what regulations the various agencies are developing, on what schedule, for what purpose, and at what cost. This calendar will help the President and the Council decide where it should focus its work over the coming year. We have a lot to do.

Controlling toxics: The road ahead

STEVEN D. JELLINEK
Assistant Administrator for Toxic Substances

One of the major concepts underlying the Toxic Substances Control Act (TSCA) is that the health and environmental hazards stemming from our society's heavy reliance on commercial chemical substances reach into virtually every nook and cranny of modern life. Nothing we touch, smell, consume or otherwise use throughout a given day hasn't in turn been affected in some way by chemicals.

Relatively little is known about the long-term, chronic effects that result from exposure to many of these chemicals. Under TSCA, however, EPA for the first time has the necessary authority to gather certain kinds of basic information on chemicals, to identify harmful substances, and—when other environmental laws cannot control the specific sources of exposure, which often involve production and use—to control those substances whose risks of injury to public health and the environment outweigh their benefits to society and the economy. Not only can we prohibit the production and use of such chemicals, but we can take a number of other actions to attack the root causes of toxic substances problems in virtually every facet of industry—product development, testing, manufacturing, processing, distribution, use and disposal. EPA takes these enormously difficult and complex responsibilities very seriously. With jurisdiction over as many as 70,000 commercial chemical substances manufactured or processed in up to 115,000 establishments nationwide, TSCA's mandate to protect public health and the environment from unreasonable chemical risks will not be achieved overnight.

However, we have set a number of short- and long-term objectives for implementation of TSCA aimed at building a strong, viable program for the future, while vigorously addressing very real and pressing chemical-related problems we face today. These objectives may be summarized as follows:

- Develop the organization and staff necessary to carry out EPA's responsibilities under the Act;
- Define methods for assigning priorities to chemical substances requiring investigation or regulation;
- Gather information on the production, use, exposure and other basic characteristics of important chemicals;
- Develop testing standards for health and environmental effects of concern, and issue rules requiring testing of selected substances or classes of substances;

- Regulate the production, use, distribution, and/or disposal of selected substances or classes of substances;
- Develop a coherent Agency-wide approach to toxic substances; and
- Work toward consistent international approaches to toxic substances control.

Under TSCA, EPA will assign highest priority to those substances that pose the greatest risk as a function of both toxicity and exposure. This means we are going to concentrate on the most important problems—problems whose actual or potential magnitude present the greatest threats to public health and the environment.

For example, chemicals that may produce chronic or irreversible health effects such as cancer, birth defects and gene mutations will take higher priority than those that produce acute effects such as eye and skin irritations. Similarly, substances that are widely dispersed in the environment and that may significantly disrupt ecosystems will take a higher priority than those that threaten individual species other than man.

We already have taken, or are in the process of taking, a number of actions to gather the kinds of basic information we need to determine priorities for various chemical regulatory actions. For example, we have issued rules under sections 8(a) and (b) to compile a list of chemical substances and to learn which substances are manufactured where and in what quantities. Final rules governing industry reporting for this inventory were issued in December 1977. Domestic manufacturers and importers of chemical substances had until May 1, 1978 to report the initial inventory information to EPA. About 50,000 reporting forms were submitted to EPA in response to the inventory regulations, covering some 125,000 substances. Once we have sorted out duplications in reporting among various companies that make the same substance, we expect that the actual number of commercial chemicals listed on the published inventory could be as high as 70,000. Our schedule called for the inventory data to be processed by the end of 1978, and for the initial inventory to be published early in 1979.

Once these inventory data are available, we will be in a position to begin selecting chemical substances and classes of chemical substances for further attention based on their production volumes. Also, publication of the inventory will trigger TSCA's section 5 premanufacture review program. The inventory data also will be useful in responding to emergency situations and quickly identifying possible sources of exposure to specific chemical substances.

Guidance we have published under section 8(e) provides another channel through which we can identify and address significant problems. Specifically, this guidance encourages manufacturers to establish an internal reporting procedure to insure that EPA will expeditiously receive any new information that reasonably supports the conclusion that a chemical substance may present a substantial risk to health or the environment.

The authority to require chemical manufacturers and processors to undertake testing under section 4 is another important tool we can use to get information about chemicals that is not currently available to EPA or other regulatory agencies.

In designing an overall approach to testing requirements under TSCA section 4, we intend to obtain the information we need without imposing needlessly burdensome costs or tying up personnel and facilities with excessive testing requirements. Therefore, we plan to rely largely on a tiered set of standards—that is, the need for long-term, more definitive, more costly tests will be determined from the results of short-term, relatively simple screening tests, together with other factors, such as the extent of exposure.

The section 4(e) Interagency Testing Committee has submitted three sets of recommendations to EPA regarding chemicals and classes of chemicals identified for priority testing consideration. We have solicited public comment on these recommendations, and expect this year either to require testing for the Committee recommendations or to explain our reasons for not doing so, as TSCA mandates.

Under section 8(d) we have promulgated rules requiring all chemical manufacturers and processors to submit lists and/or copies of any unpublished health and safety studies already performed on substances recommended in the first Interagency Testing Committee report. In general, we plan to review results of tests already performed before requiring manufacturers and processors to perform additional tests.

Development of the premanufacture review program is among EPA's most critical tasks under TSCA. As provided in section 5, any person intending to manufacture or import a new chemical substance must submit a premanufacture notice to EPA at least 90 days before introducing the substance into commerce. Any chemical substance not included on the inventory of substances compiled under section 8(b) will be considered "new." The premanufacture notification requirements become effective 30 days after publication of the inventory.

EPA proposed a rule governing reporting for new chemical substances last fall. This rule, together with the notice form, will specify the types of information to be reported to EPA. We also invited public comment on the development of separate testing guidelines to help inform industry on what kinds of evaluations EPA considers necessary to make decisions on new chemicals. The development of such guidelines, along with the section 4 testing standards, will in many cases permit chemical companies to take adequate action on potential chemical hazards on their own without EPA intervention.

EPA has taken action under section 6 of TSCA aimed at controlling the production, distribution, use and disposal of specific chemical substances or classes of substances. Our first action was to issue regulations on the labeling and disposal of polychlorinated biphenyls (PCB's). The second phase of PCB regulations, implementing the ban on manufacture and use in any way other than a totally enclosed manner, was proposed in June 1978.

In a joint action in March 1978 with the Food and Drug Administration and the Consumer Product Safety Commission, we have banned most aerosol uses of chlorofluorocarbons (CFC's). EPA is further investigating ways to reduce CFC emissions from non-aerosol sources.

In short, we are well on our way to completing the foundation for controlling toxic substances, and plans

are underway to attack specific chemical hazards. The year 1979 will see additional activity in both of these areas, particularly regarding premarket notification to EPA on new compounds. Our aim this year remains as it has been—to minimize the human health and environmental risks posed by some chemicals while maximizing the social and economic benefits derived from the majority of them.

Increasing the effectiveness of environmental programs

THOMAS C. JORLING
Assistant Administrator for Water and Waste Management

The 1977 Clean Water Act has provided us with some major and, in my opinion, much needed directions toward the application of alternative treatment and the control of toxics. Since the bill was passed late last year we have been conducting an intensive effort to translate the amendments into the requisite guidance and regulations.

In late September we issued final regulations constituting a comprehensive change in the rules governing the construction grants program. This was a considerable achievement, a large amount of work being accomplished a mere nine months after the law was passed. I am especially pleased that the new rules were developed in full view of the public with heavy reliance upon participation by those outside the Agency.

Developing these and other regulations required by the new Act has called for closer integration of the management of related environmental programs. In the process, we have been forging an internally consistent and unified process to implement our various statutory authorities in a complementary way. It is inherently logical that tying our programs together wherever possible will make them ultimately more effective.

A prime example of this integrative theme is the pretreatment of industrial wastes. We will only be able to solve such serious problems if we make the needed effort to integrate skillfully a number of separate authorities and programs.

During the first five years following passage of the 1972 Amendments, approximately one-half of all industrial dischargers—the indirect dischargers—were virtually free of any direct burden for pollution control. During this same five years, the direct dischargers—comprising 87 percent of all other industrial dischargers—made major investments in applying the Best Practicable Technology to the treatment of their wastes.

It is more than just a matter of equity, however. Indirect dischargers are a major source of toxic chemicals entering the environment—toxics that are either uncontrolled or inadequately treated by municipal treatment plants. They can also render treatment facilities inoperative.

Once in our waterways, many of these pollutants are toxic to aquatic life, are persistent, can concentrate in the food chain, and are known or suspected carcinogens. These toxics also contaminate municipal sludges.

The removal of toxic industrial wastes before they enter the sewer system will result in increased potential for the reclamation of wastewater and the reuse of municipal sludge, such as through land application. The reclamation of wastewater is especially important in water-short areas. The reduction of toxics in municipal sludge is important because of the growing need to use the sludge as a beneficial resource. We can no longer afford to deal with it merely as an unwanted waste product which would otherwise have to be disposed of in more costly ways.

In June we took a first major step in controlling the sources of toxic pollutants introduced into municipal sewer systems. We issued the national pretreatment strategy and a regulation to implement it. The strategy commits the Agency to developing national pretreatment standards by the end of 1979 covering approximately 40,000 indirect dischargers of toxics. The standards will be based upon the Best Available Technology economically achievable by indirect dischargers. As in the case of BAT standards for direct dischargers, the Agency will initially focus on 21 industrial categories and 65 categories of toxics. The pretreatment standards will be promulgated for each separate industrial category. For existing sources, compliance will be required within three years from promulgation. New sources will have to comply immediately.

The national pretreatment strategy and the implementing regulation require all municipalities having plants with capacity above five million gallons per day to develop programs to enforce the national standards. In addition, a demonstrated intention to enforce the standards will be a prerequisite for any municipality seeking to modify its NPDES permit.

Implementing the pretreatment strategy will require integration of a number of programs along the lines I mentioned earlier. The NPDES permit program provides the basic enforcement mechanism. As municipal NPDES permits expire and are reissued, they will be revised to require the development of a local program to enforce local, state and national pretreat-

ment standards. Municipal treatment systems that allow industries to violate national standards will be subject to enforcement actions along with the violating industry.

The cost of developing the local program has been made eligible for 75 percent federal funding. The new regulations for construction grants require specified increments of progress in developing local pretreatment programs prior to award of Step 2 and 3 grants. To ensure that the annual local costs of operating the pretreatment program are provided for, grant applicants must also show that user charges and any industrial cost recovery, in conjunction with other revenue sources, will be sufficient to continue implementing the pretreatment program.

At the same time we have been devoting special attention to the management of municipal and industrial sludges. Reducing the concentration of toxics in the municipal sludge provides opportunities for lower-cost methods of sludge disposal and the beneficial reuse of sludge. Conversely, the preremoval of toxics in industrial waste streams will inevitably add to the residual of hazardous materials that the industry and the community must deal with safely.

Our evolving integrated municipal sludge management strategy is designed to attain two principal goals. One, to assure that municipal sludge is managed so as to protect public health and the environment; the other, to conserve energy and natural resources through the beneficial use of municipal sludge wherever practicable. Both goals represent the expressed mandate of Congress in the 1977 Act.

Municipal strategies covering the disposal of sludge must be responsive to the provisions of four major federal statutes: the Clean Water Act, the Resource Conservation and Recovery Act, the Marine Protection, Research, and Sanctuaries Act, and the Clean Air Act. These statutes address the major sludge disposal practices: landfilling, landspreading, incineration and ocean disposal.

To effect a comprehensive and integrated Agency approach to municipal sludge management, I have made the tentative policy decision to depend primarily upon the regulatory authorities granted under Section 405 of the Clean Water Act. Using this approach, regulatory guidelines for municipal sludge utilization and disposal will be developed, with implementation through the NPDES permit program and the general enforcement provisions of the Clean Water Act.

We are trying to carry out our sludge management strategy in such a manner that municipalities have adequate time to control the sources of toxic pollutants in sludge before being forced to adopt disposal options that are resource- or energy-intensive.

I should add that the November 1977 amendments to the Marine Protection, Research, and Sanctuaries Act requires the termination of all ocean dumping of sewage sludge by the end of 1981, placing even greater emphasis on alternatives to ocean dumping and compliance with implementation schedules in adopting the chosen alternatives.

The pretreatment and sludge disposal issues exemplify our effort to carry out environmental statutes in a coordinated way that recognizes the interdependencies of the various parts. As environmental managers, we have no choice but to do so.

Past cases of failure to integrate fully the implementation of our various authorities—and thus realize their full potential—have been a serious public concern. I am therefore greatly encouraged by our development of a coherent strategy for environmental management. The trend will continue.

A reaffirmation of environmental goals

DAVID G. HAWKINS
Assistant Administrator for Air, Noise and Radiation

EPA is charged with setting in motion a number of incredibly complex laws that involve the states to a greater degree than ever before.

Despite the progress that has been made in reducing nationwide emissions of air pollutants, failure to achieve the National Ambient Air Quality Standards in many areas of the country represents the reality of the implementation of the 1970 Clean Air Act. The Congress began to address this situation more than three years ago and initiated the drafting of the first comprehensive amendments to the Act since 1970.

With the enactment of the Clean Air Act Amendments of 1977, Congress has reaffirmed its commitment to the goals originally established by the 1970 legislation. The new Amendments provide a strong mandate and make it clear that Congress does not intend that the nation's energy problem be allowed to compromise environmental quality. Some people

have referred to the new legislation as a "mid-course correction." I believe that "mid-course reaffirmation" is more appropriate. The Act strongly reaffirms our goals of attainment and the prevention of significant air quality deterioration. It renews and strengthens our existing programs as well as adding new directives which pose some of our greatest challenges. The new Act strengthens the air quality management approach by placing more responsibility on state and local general purpose governments. The Amendments call for new patterns of interaction between all levels of governments. As a result of these requirements, a strong program for enhancing public understanding and participation will be necessary in order to successfully implement the mandates of the Act.

To a large extent the hardest phase of our efforts to meet ambient air quality is yet to come. The progress to date has been achieved through the application of controls to sources generally amenable to control requirements. During this next round of control we will be forced to concentrate on the less conventional sources (fugitive dust, fugitive emissions, transportation activities) with which we have far less control experience. In other words, we have done the easy things and what is left are the more difficult, less tried and true methods of air pollution control.

The heart of the new Amendments focuses on the problem of attainment in areas where the National Ambient Air Quality Standards continue to be violated. States were required to submit revisions to their State Implementation Plans (SIP's) for all areas that are not attaining the national ambient air quality standards. The SIP revisions' deadline was January 1, 1979, and must demonstrate attainment of the national standards. The Act provides economic sanctions for those nonattainment areas that do not have approved plan revisions by July 1, 1979. These sanctions include prohibiting the construction of major new or modified air pollution sources and discontinuing certain EPA and Department of Transportation grants.

Let me put the new source growth issue into some perspective. The review of new sources is an important part of the effort to achieve and maintain ambient standards. Initially, the 1970 Act was interpreted as not allowing any new source construction in areas which were in violation of the primary standard. However, it became increasingly obvious that a total ban on new source growth was neither realistic nor necessary. In December 1976, EPA established what is known as the "offset policy." This balanced the two goals of economic development and progress toward health standards. It allowed new source construction in nonattainment areas provided there was a net air quality benefit due to compensating emission reductions from existing sources and that emissions were curtailed from the proposed new source to the greatest extent feasible. The offset policy was endorsed by Congress in the 1977 Act as a viable way of handling new source growth. EPA's "offset policy" is effective until July 1979.

At that point, the law requires states to have developed their own provisions for the review of new sources in nonattainment areas. The Amendments provide either of two options: States can devise management plans which both attain standards and provide a quantified margin for emissions growth for new construction, or states can adopt their own version of the case-by-case offset approach. Either way, the SIP must attain standards by new statutory dates and show continuous progress in the interim. Construction of new sources is prohibited in areas where states fail to adopt new regulations and plans by July 1979, until an acceptable plan is developed by the state and approved by EPA.

Let me take a few lines to discuss the so-called "sanctions." First, let me point out that these limitations are not meant to be punitive. They serve as an indication of the serious need for states to develop and submit plans in January 1979, which provide for attainment of the National Ambient Air Quality Standards as expeditiously as practicable. We believe that in most cases the states are seriously working toward the development of the 1979 plans. These states do not look upon these limitations as a threat, but rather a means of protecting those that are working toward the development of a plan which will provide for attainment of the national standards. In this way states that have not submitted such a plan will not possess an advantage regarding new source growth over states that have developed a comprehensive air pollution control program.

I'd like to touch briefly on what flexibility is available to the states as they revise their SIP's and what we are doing to provide some options in both guidelines and approaches.

The new schedules established by the 1977 CAA call for SIP revisions to go into effect by July 1979. These must provide a mix of control strategies sufficient to achieve the national standards by the end of 1982. However, for those pollutants most difficult to control—carbon monoxide and photochemical oxidants, for which major area-wide transportation emission reductions are necessary—the Amendments allow a two-stage SIP process: If the January 1979 submittal shows that, after the adoption of all known reasonably available control measures, standards cannot be achieved by December 1982, an extension for up to five years can be requested. This means that additional measures which are not feasible to implement at this time can be delayed until 1982 to 1987.

There are, however, some additional requirements for areas with attainment dates after 1982. For these areas, the SIP must commit by 1979 to an automobile inspection and maintenance (I/M) program. Mandatory inspection and mandatory repair must begin no later than 1982 where a centralized (state operated) system is used and no later than 1981 where a decentralized (private garage) system is used. Also, a more comprehensive new stationary source siting procedure, which examines location size alternatives along with social and nonenvironmental costs, must be used. Finally, additional SIP revision must be submitted by July 1982 to ensure attainment by 1987. This provides extra time to develop some of the most difficult control strategies.

EPA is trying to develop a reasonable approach on our requirements for what constitutes reasonably available control technology. We will focus at first on hydrocarbon sources because so little has been done in the past to control hydrocarbon emissions through

regulations. We will be issuing guidance to define suggested levels of reduction for hydrocarbon sources, and we'll permit states to phase in these requirements as we issue the guidelines. In addition, we will work closely with the states and allow them to phase in unconventional controls for particulates, with emphasis on fugitive dust emissions.

Finally, the SIP's must demonstrate that the emissions reductions will take place throughout the plan period and will not concentrate at the end. Under the 1970 Act, it was only necessary that the plan demonstrate attainment. However, in the 1977 Act, Congress said the SIP's must also show annual incremental reductions in total emissions (new as well as existing) including substantial reductions in the early years. States will report annually on the progress being made. Congress added this provision to ensure that attainment dates do not once again come and go without an adequate early warning of implementation problems and the initiation of corrective actions.

Clearly the development of SIP's has posed many new challenges. The deadlines contained in the Amendments are extremely tight when measured against the complexity of the job to be done. EPA has devoted much time and energy in trying to establish reasonable and achievable goals for SIP submissions that both meet the intent of Congress and are achievable with the available resources.

Radiation

The keystone of the federal system for providing consistent radiation protection is Federal Radiation Guidance issued by the President to all federal agencies. The authority "to advise the President with respect to radiation matters, directly or indirectly affecting health, including guidance for all federal agencies in the formulation of radiation standards and in the establishment and execution of the programs of cooperation with states" was formerly vested in the Federal Radiation Council. With the establishment of EPA in 1970, the Federal Radiation Council was abolished and this authority granted to the Administrator of EPA. Under this authority, EPA develops and recommends radiation protection guidance to the President. When approved by the President, these recommendations are published as Federal Radiation Guidance to the agencies in carrying out their radiation control programs.

Historically, this Federal Guidance has provided the formal basis for most federal and state radiation protection regulations, including those limiting occupation exposure; providing protection of the public from exposure due to such radiation sources as nuclear power operations, commercial and medical uses of radioisotopes, fallout from nuclear weapons testing, and occupational exposure of uranium miners to radioactive materials resulting from the radioactive decay of radon. It has recently been amplified in the area of medical radiation exposure. The use of radiation in the practice of medicine, although it represents by far the most significant source of manmade exposure to the public, has been until now a source for which only minimal federal guidance on radiation protection existed. However, with the help of an Interagency Working Group on Medical Radiation, we have now succeeded in formulating a comprehensive set of guides for radiation protection in the use of diagnostic x-rays. Following joint recommendation of this guidance by the EPA administrator and the Department of Health, Education and Welfare assistant secretary for health, the President approved the guidance and it was published on February 1, 1978, in the *Federal Register*. Thus, for this source of greatest public exposure to manmade radiation, we have broken significant new ground in radiation protection.

Under this Federal Radiation Guidance authority, we have also proposed guidance for cleanup of areas contaminated with transuranic elements (plutonium) and are in the process of updating the basic guidance for occupational radiation exposures and guidance for protection of the public during and after nuclear incidents. In addition, we are developing guidance or environmental protection criteria for the storage and disposal of all forms of radioactive wastes, and we expect to conduct a review of the radiation protection standards for the general public in the near future.

In addition to these guidance and standards activities, we operate the only nationwide environmental radiation monitoring system, we conduct field studies of the environmental impact of specific nuclear facilities, and we are heavily involved in the review of environmental impact statements for nuclear power plants and all other nuclear and radiation activities. The radiation program, although one of the smaller programs in EPA, is very comprehensive and obviously very busy.

Noise

Though hearing loss is the most clearly understood noise hazard, it may not be the most serious threat to health posed by noise. Mounting evidence from recent studies in the United States and abroad suggests that noise's other health effects may prove to be more pervasive and serious than hearing loss. For example; there is growing evidence of a link between noise and the development of high blood pressure and other heart circulatory problems.

Of the total noise problem, urban traffic and freeway noise affects more people than any other group of noise sources in this country. We believe the most cost-effective method of reducing traffic noise is to reduce the noise at the source. In order to take maximum advantage of available technology, this noise reduction should be designed into newly manufactured motor vehicles. The Noise Control Act of 1972 gave EPA the authority to control the noise levels from newly manufactured vehicles, as well as vehicles now being used by interstate motor carriers, and we are devoting a great deal of our effort in developing such regulations.

The loudest, most pervasive source of noise is, of course, the truck. In 1974, EPA promulgated regulations limiting the noise from vehicles over 10,000 pounds operated by interstate motor carriers. This in-use vehicle regulation was designed to remove the most serious peaks of noise from interstate trucks and buses, and it became effective in October 1975. Although applying to at least 1 million of the over 5 million trucks and buses in this country, such a reduction from existing vehicle fleet noise levels alone was not sufficient.

Accordingly, we started work simultaneously to

further reduce traffic noise by setting standards for newly manufactured motor vehicles. We issued regulations which became effective in January 1978, requiring that new trucks over 10,000 pounds emit no more than 83 decibels at 50 feet. This level will be lowered to 80 decibels in 1982. We have also proposed noise limits for new buses, motorcycles and garbage trucks which we expect to issue in 1979.

Although all of these actions will help to control highway noise, they can in no way be viewed as a total solution. The growth of both the motor vehicle fleet and the number of people living in urban areas, together with an expected increase in the average automobile noise levels as a result of auto industry efforts to meet fuel economy standards, are expected to worsen the urban noise problem in coming years.

Clearly then, even to hold national surface transportation noise levels at no higher than those of today will require substantial further action. Truck noise levels must be reduced further than EPA has currently prescribed—and we propose to do just that with current efforts we now have underway. Also, we have under intensive study the remaining contributors to the surface transportation noise problem: automobiles, light trucks and tires. As a supplement to these actions, regulatory initiatives on mufflers are being considered. Even with strong state and local ordinances to supplement the federal standards, we expect that it will be necessary for us to promulgate more stringent regulations for vehicular sources beyond the initial round of regulations which are now in process.

In other noise development, EPA has issued final standards for interstate rail carriers and portable air compressors, and proposed standards for hearing protectors. Regulations are under study for other transportation vehicles, and selected industrial, construction site and household products.

In 1979 the Noise Program will increase its emphasis on technical assistance and grants to other federal agencies and to state and local governments for the development and implementation of noise control programs. Assistance will be provided in establishing complementary state/local in-use enforcement activities for noise sources where new product regulations have been federally established, and in developing programs directed at localized problem areas that are particularly amenable to state/local actions.

Technical assistance will also be provided in the form of direct guidance to state and local agencies on how to define noise problems, and to other federal agencies whose programs have noise control implications.

Two good examples of EPA's technical assistance grant efforts are the "Quiet Community Program" (QCP) and the "Each Community Help Others" Program (ECHO). QCP works with a few selected communities to develop comprehensive noise programs. ECHO provides technical assistance to local communities on specific noise problems by providing consultative services from officials of communities which have successfully overcome similar problems.

During 1979, EPA plans to designate 30 communities for technical assistance under the ECHO program and three new localities for assistance under the QCP, bringing the total number of on-going QCP's to six.

Uncovering second generation pollution problems

STEPHEN GAGE
Assistant Administrator for Research and Development

Our efforts to protect the quality of our environment are undergoing a qualitative shift. Many of the most obvious sources of health hazard—the open sewers, belching smokestacks, fuming automobiles and smoldering dumps—are gradually being brought under control. As with any other major problem, we tackled the most obvious symptoms first and are making excellent headway. While tackling these problems, we have gained a far greater understanding of how human activities impact the environment. For example, in studying how biologically harmful sulfate pollutants are formed in the atmosphere, we have discovered that concentrations of these pollutants are sometimes the result of the emission of precursor pollutants a hundred or more miles away.

An increased understanding of environmental processes, of pollutants and their impacts, along with vastly improved technologies for measuring or controlling pollutants, has allowed us to focus our attention more precisely upon a new set of salient remaining problems which once lay hidden behind those more obvious hazards mentioned above.

For example, despite heavy spending to control municipal and industrial wastewater discharges, it is becoming increasingly apparent that water pollution from such diffuse sources as agricultural runoff and fallout from polluted air adversely affect receiving waters, in many cases rendering them unsuitable for their planned uses. Our research efforts address many such "second generation" environmental problems

which may well be of primary concern in the near future.

As we begin to deal with these newly recognized problems, our research and development program will lead the way. The following are some of the environmental problems which I feel are on the horizon.

Air pollution

While we have made significant progress in recent years in controlling sulfur dioxides, particulate and carbon monoxide concentrations, we still have a long way to go before the air is healthy throughout the nation. The more we learn about the health effects of the mixture of sulfur dioxides, fine particulates and other airborne pollutants, the deeper our concerns become.

In addition, recent studies have improved our ability to estimate the benefits of air pollution controls. This benefit side of the environmental protection equation—so long neglected because of the apparent difficulty of putting a dollar value on clean air—is being fleshed out. Preliminary results of an EPA-sponsored study of the Los Angeles Basin indicate that the benefits of pollution control in terms of improved property values, improved health and the willingness of residents to pay for cleaner air, may well be several times larger than indicated by earlier studies.

In addition to improving our ability to quantify the benefits of pollution control efforts, future air-related research will concentrate on a number of topics. First, we need to know more about the long-range movement and change of air pollutants such as fine particles, ozone/oxidants and secondary organic compounds. Information on human exposure to, and the health effects of, such substances, along with alternative control strategies, is essential for effective regulatory efforts.

We must also know more about trace elements and air pollutants which degrade visibility. Some trace elements can be toxic to both humans and their environment in particular concentrations or chemical forms. To focus our control efforts more effectively, we need more information on the sources and impacts of the most hazardous of these substances.

Finally, we may soon be able to put major pieces of the air pollution puzzle together. As we gather more and better data on pollutant sources, human and ecological health effects, and ambient exposure conditions, we improve our ability to identify cause-and-effect relationships and to quantify costs and benefits. To improve such abilities, we need more data characterizing the emissions from different sources, better data on fugitive emissions and dust as these relate to particulate pollutants, and improved instruments and techniques to measure and control fugitive emissions.

Drinking water

It is commonly accepted that one responsibility of modern government is to provide its citizens with a safe supply of drinking water. Early concerns were focused on security and adequacy of supply and on eliminating waterborne diseases. Currently our task is to reduce the risk from chemical contamination while, at the same time, avoiding the risk of waterborne infection.

The overall goals of EPA's drinking water research program are to develop measurement and monitoring methods to identify and quantify drinking water contaminants, to assess the health effects of these substances and to develop treatment technology to reduce contaminant levels to acceptable concentrations. We also seek to provide the scientific and technical bases for protecting groundwater quality. This goal is especially important because approximately 50 percent of the U.S. population depends on underground sources for their drinking water.

In the short term, the greatest needs and accordingly our highest priority will be on technology development and on assuring the quality of analytical methods. In the long term, emphasis will be placed on health effects, development of analytical methods, and groundwater research.

Energy and environment

EPA has long been in the forefront of research into the effects of, and technologies to control, pollutants from nonnuclear energy development and use activities. This central role was acknowledged by Congress when, in 1974, it sponsored the Interagency Energy/Environment R&D program and gave EPA the responsibility for planning and coordinating that $100-million per year effort. Out of this program have come major scientific advances—the identification of long-range movement of sulfur pollutants in the atmosphere, for example, and the development of flue gas scrubber technologies.

In addition to expanding our role in measuring long-term movement of energy-related air pollutants, and maintaining our involvement in other areas such as mining impact assessment and control, EPA has taken several major research initiatives in the energy/environment arena. The first is to ensure that new and developing energy-related technologies such as coal gasification, liquefaction or fluidized bed combustion will be developed in concert with adequate environmental safeguards. Via cooperative agreements with the Department of Energy, we are making significant progress toward that goal. We are also anticipating development of solar and geothermal resources by developing environmental assessments of the former and preliminary environmental development guidelines for the latter. Most of the research and development activities in the energy area are divided among several federal agencies and departments. A high and very effective level of cooperation has developed among these different groups and is helping to assure the most effective possible investment of our energy/environment research dollar.

At the same time as we look to future energy technologies we are also focusing on cleaning up and improving those technologies which are with us today. For example, nitrogen oxides (NO_x) have been implicated in damage to the earth's protective ozone layer, smog and high nitrate rainfall. We estimate that 99 percent of nitrogen oxide emissions originate from fuel combustion, approximately half coming from

stationary sources such as boilers, and the other half from mobile sources such as automobiles. By 1985, however, with the continued growth in energy use and increased reliance on coal as fuel, EPA anticipates a 70/30 percent split of stationary to mobile polluters.

A major breakthrough in controlling NO_x emissions occurred in 1978. Our research into staged combustion techniques in an experimental mid-sized (15 to 20 MW) boiler consistently produced NO_x emissions below 150 parts per million—a decrease in emissions of as much as 85 percent compared with conventional burners of this size. In addition, the new boiler design is compatible with new coal-fired utility and industrial boilers, boilers switching from gas and oil to coal, can be retrofitted to existing boilers and offers an energy efficiency equal to or greater than comparable conventional boilers. We expect to improve on those developments in the coming years.

Expanded use of existing coal-burning technologies also requires that technologies for sulfur oxide and particulate control be improved. Additionally, research must strive to fill major information gaps regarding the magnitude of the health and environmental problems associated with trace elements, radioactive material and polycyclic organic emissions produced during conventional combustion of coal.

Toxic substances

The chemical industry is a constant contributor to contemporary American life. Pesticides and fertilizers, for example, are important agricultural tools. Drugs save lives; plastics save money and weight. Millions of jobs are generated, billions of dollars exchanged.

However, the manufacture, use and disposal of the everyday products that contain some of the more than two million recognized chemical compounds can present significant dangers—dangers that are often difficult to anticipate.

The fundamental issue is how to derive maximum social benefit from modern technology while limiting attendant risk to an acceptable level. It is this issue which lies at the heart of the regulatory dilemma. It is this issue which has formed the basis for the evergrowing body of landmark environmental, public health and other regulatory legislation which has been enacted by the United States Congress. Research plays a key role in the decision process providing the necessary technical information base from which estimates of relative risk versus benefits may be evaluated.

To fulfill its mission in protecting our citizens from exposure to toxic chemicals, EPA has established two general research goals:

1. To characterize the nature and extent of the risk posed by potentially hazardous chemicals; and
2. To develop control strategies, systems and/or management practices which will prevent, or at least minimize, exposure to hazardous chemicals.

Accomplishing the first of these goals involves research in three general areas: the human and environmental effects of toxics substances, the assessment of the magnitude and mechanisms of exposure to toxicants, and the production of integrated risk assessment and criteria documents as input to the regulatory decisionmaking process. Achieving the second goal involves first the characterization of toxic emission sources (answering the how, why, when, where and how much questions relating to chemical production) and the development and evaluation of alternative control strategies and/or technological systems which can mitigate exposure to hazardous compounds.

To provide some of the information we need to effectively control toxic substances, a program was begun in 1978 to analyze approximately 1000 types of industrial wastewater for organic compounds thought to pose health hazards. The tool for this analysis is a gas chromatograph mass spectrometry system.

This system, using a single, comprehensive analytical procedure, is capable of identifying any active organic substance in concentrations as low as 10 milligrams per liter of water. Once identified, the toxicity of a substance can then be determined using computerized access to an organic substance data base.

Currently, ORD chemists are developing a protocol for the standardized analysis of 114 key industrial effluents, a procedure complicated by the presence of more than ten times that number in a typical wastewater sample. Information developed in these analyses and through additonal surveys, along with health effects data already established, will be used to establish whether or not given chemical discharges should be limited or prohibited.

In addition to the above efforts, EPA's research seeks to develop procedures to rapidly test the toxicity of a substance. The availability of such procedures is key to the cost-effective assessment of the large number of new chemicals entering the marketplace each year. Our efforts to develop rapid testing procedures focus on two areas. First, we are developing and testing computer models capable of delineating the pathways followed by potentially harmful chemicals in freshwater ecosystems. Such models, when developed, will improve our ability to project the ultimate fate of a substance before that substance becomes a threat to human health. Second, we are improving our understanding of bioaccumulation. Bioaccumulation is the process whereby a substance, even in small amounts, can enter the water environment and food chain and be highly concentrated in fish tissues. Such fish may then become food for humans and, thus, a health hazard. We are working to improve our ability to predict the bioaccumulation potential of substances based upon their chemical characteristics. Such an ability will allow us to focus on controlling those substances most likely to enter the human food supply.

The above examples represent but a few of our 2500 research projects, but should evidence the diversity and scope of EPA's research program as we move to address these newly recognized environmental problems. The quality of our work sets the standard for the Agency. This is a challenge that we are meeting with enthusiasm and confidence.

Report from Region I

WILLIAM R. ADAMS, Jr.
Region I Administrator

The year of 1978 has been a year of changes for the Environmental Protection Agency. We have broadened our scope to include activities that have previously received relatively little attention, and we have begun to approach the whole question of environmental regulation from a new standpoint designed to emphasize public participation in the regulatory process.

One of our highest regional priorities last year and in coming years is development of environmentally sound management practices for solid and hazardous wastes. This area has traditionally received much less attention—and certainly less funding—than air and water pollution control. In fact, in some instances, air and water pollution control activities have actually created solid waste management problems, as with disposal of sludges.

We cannot continue to ignore the problem. We are rapidly running out of inexpensive disposal alternatives and must begin to exercise so-called cradle-to-grave management of wastes, including conservation, source reduction, recycling and reuse where possible, and environmentally acceptable disposal of residuals.

Hazardous waste management is another area that simply cannot be ignored any longer. Already we have experienced incidents of contamination in Lowell, MA at a private disposal facility; in Gray, ME where groundwater was contaminated by a private disposal operation; and in Rehoboth, MA where a private disposal operation threatened drinking water supplies in Rhode Island.

These incidents are in fact only symptoms of a problem that has been with us for some time. For years we have been disposing of toxic and hazardous chemicals in environmentally unsound ways, and now our mistakes are coming back to haunt us.

And yet these environmentally unsound disposal practices continue. Each year we generate enormous amounts of hazardous wastes, an estimated 87 million gallons each year, in this region. But we do not have a single approved hazardous waste disposal area in New England. Some of the wastes are exported out of the region but we believe the majority of this material is illegally dumped into drains or directly into our waterways, or stored at illegal sites.

We cannot allow these practices to continue. And we cannot continue to simply export the problem outside our own regional boundaries.

At the request of the New England Governor's Council, the New England Regional Commission has undertaken a $245,000 study of the disposal of toxic wastes. The Commission will try to put together a precise inventory of the chemical wastes generated in New England and to find regional solutions to such problems as where to dump wastes and who is responsible for them. In the coming year, we will be working closely with them and with the New England states on this matter, because I believe it is potentially one of the most serious this Agency has to face.

In the air pollution area, smog, or ozone, continues to be a very serious problem in the region. Violations of the ozone standard were reported at every station in New England that monitors this pollutant, and the frequency of violations appears to be increasing. In fact, some areas of Connecticut are second only to Los Angeles with respect to the severity of smog problems.

About one-half of all the hydrocarbons that form smog are generated by automobiles. The federal Clean Air Act requires auto manufacturers to achieve certain emission limitations, and most do so by installing pollution control equipment, such as catalytic converters. However, this equipment can go out of adjustment just as any other part of the automobile can. In order to make sure that this equipment operates up to its design capability, periodic inspection and maintenance is necessary. Rhode Island passed I&M legislation two years ago, and Connecticut in May of this past year. One of this region's highest priorities in the coming year will be encouraging Rhode Island and Connecticut to implement their legislated programs and Massachusetts to pass an I&M bill.

In the field of water pollution control, progress has been slow and steady, not as dramatic as in the early days of the Agency. All the major industrial dischargers in the region have installed best practicable control technology or are on enforceable schedules to do so. Municipalities do not have such an impressive compliance record, but we will continue to make grants to municipalities for sewage treatment facilities, and as facilities currently under construction come on line, we will be seeing more and more improvement to our region's waterways. Already it is possible to catch a salmon in downtown Bangor, ME or a trout in New Hampshire's Pemigewasset River.

As point sources of pollution come under control, nonpoint sources of pollution such as urban, agricultural and silvicultural runoff will have an increasing impact on our waterways. The 208 water quality management programs which are designed to control nonpoint source pollution problems are entering the implementation phases and we should start seeing results of these programs in the next few years.

Another priority for this Agency in the coming year will be assuring the protection of the environment in energy development projects. New England has no indigenous energy supplies and has traditionally been at the end of the energy pipeline. We cannot continue to rely on other regions and other nations for our energy but, at the same time, we cannot and will not compromise our environment in order to permit energy development. Thus, during the next few years we will be looking very closely at energy projects such as the proposed Pittston oil refinery, the Dickey-Lincoln hydroelectric power project, and the Sears Island power plant, all in Maine, and the proposed Charlestown, RI nuclear power project to make sure that, if these plants are built, all reasonably available technology to minimize adverse environmental effects is employed.

Last, but by no means least of the issues with which

this Agency will concern itself in the coming year, is public participation in Agency decisionmaking. Although public participation has always been accepted, it has never before been so actively sought.

The issues this Agency faces in the coming years are going to require very difficult decisions. Some decisions will involve application of relatively expensive control technology. Some decisions will have impacts on individual citizens as is the case with I&M programs. Decisions like these will require careful cost/benefit analysis, and the public should be involved in deciding whether the sometimes considerable cost of pollution control equipment is worth the public health and environmental benefits the equipment is supposed to provide.

The public has both a right and a responsibility to participate in decisions of this magnitude. It is the job of this Agency to provide people with the information necessary to make decisions, and the opportunity to participate in the decision. I believe that, given the opportunity, the public will accept this responsibility and add a very important element to our decision-making.

Report from Region II

ECKARDT C. BECK
Region II Administrator

Region II encompasses one of the most diverse areas in EPA's entire structure—from Puerto Rico and the Virgin Islands, which share a beautiful but fragile ecology, to New Jersey, the most densely populated state in the country and one of the most industrial, yet with a land area that is still 25 percent wilderness. Then, there is New York with its raw sewage discharges into the Hudson River and erupting chemical landfills, such as Love Canal in Niagara Falls, where the honeymoon is over.

Love Canal can now be added to a growing list of environmental disasters involving toxics, which range from industrial workers stricken with nervous disorders and cancers, to PCB's in the milk of nursing mothers living all over the country. The tragedy of Love Canal demonstrates that most environmental problems are not confined to one media. In this instance, a waste disposal problem is triggering the emission of hazardous gases into the atmosphere, and, at the same time, causing the leaching of highly contaminated wastes.

In the past year, the major priority for Region II has been to integrate environmental programs into a comprehensive overall plan directed at specific goals. Divisions and branches of the Regional Office in New York City are undergoing a reorganization process to better reflect this philosophy of environmental management. Concurrently, we have been working closely with the state agencies to draft agreements that will shift the emphasis of environmental cleanup from cure to prevention. The development of these State/EPA Agreements represents a joint state/federal effort to integrate program management and eliminate gaps between levels of authority, responsibility and interest. The purpose of the Agreement is to develop comprehensive five-year strategies for pollution abatement. These strategies will identify for each state and territory the program objectives, the delineation of responsibilities among agencies under each objective and the level of commitment by each agency. The Agreements are more than just a description of a state's environmental management plan for a specific media. Each is a management tool which will assist and guide the state in carrying forward "second generation" strategies to combat "second generation" problems such as toxic chemical contamination of groundwater. These documents also provide a direct statement about the process of environmental management to concerned citizens and government officials. They open the process by which choices and tradeoffs are made while the future course of the program is determined.

The very process of developing these agreements is helping bring together levels of government—federal, state and local—in practical, analytical, negotiative sessions for determining which environmental problems need to be tackled first, as well as where and how to tackle them together.

When this article is published, the New York State/EPA Agreement on Water Quality Management will have been signed in final form by the commissioner of the state's Department of Environmental Conservation and me. But the Region has already reaped the benefits of having gone through the process. One example involves the State Management Assistance Grant (SMAG) to New York pursuant to Section 205 (g) of the 1977 Clean Water Act. We were in an excellent position to make a SMAG to New York that will effectively address its priority water quality management problems through a review of the comprehensive list of tasks laid out in the NYS/EPA Agreement. Selections were made, of course, on the basis of which tasks have the highest priority and for which SMAG funds are appropriate.

The Agreement details how New York plans to spend both state and federal money over the next five years in attacking major water pollution problems. Region II is developing another agreement on air quality management with New York, and water quality management agreements with New Jersey and the Commonwealth of Puerto Rico. Air agreements for these jurisdictions are also planned.

One of the top priority problems listed in the NYS/EPA Agreement on water quality management is elusive toxic pollutants, like PCB's, Mirex, lead, zinc and cadmium, which come mainly from industrial processes. EPA pretreatment requirements are one tool that will help halt their discharge into lakes and rivers. But many businessmen are worried that the cost of meeting these, plus the high cost of secondary treatment standards, will drive them out of business. The City of Buffalo, NY is a prime example of the environmental and economic problems facing the Agency in the Northeast. On the one hand, in Buffalo we have the

serious impact of toxics and phosphorous discharged into the fragile and vital ecosystem of the Great Lakes. On the other, we have the impact of cleanup costs on older industrial plants.

EPA is making an in-depth study of these economic impact problems using Buffalo as a model. The Agency is giving particular attention to potential plant closures or relocations. These plant level effects will ultimately be combined to develop an estimate of the overall economic impact on Buffalo attributable to the environmental regulations affecting industrial dischargers.

What to do with sludges from municipal treatment plants, a major unresolved issue for many New York-New Jersey communities, is another top priority addressed in the NYS/EPA Agreement. Ocean dumping of sewage sludge is prohibited by law after 1981, and new alternatives, such as landfilling or composting, are being sought. Metropolitan area sewage sludge contains constituents which are environmental problems in themselves. The decision point for the 55 remaining municipal sludge dumpers in the region on which alternative method to implement is at hand, but no matter what method is used—landfill, incineration, pyrolysis, recycling—some environmental impact will result. The NYS/EPA Agreement outlines two major strategies for dealing with residual wastes. One recognizes that valuable energy and usable resources can be developed from them. The second deals with the proper disposal of any remaining residual wastes. While Region II continues to view ocean dumping as the least acceptable disposal method, emphasis has been placed on tying our ocean dumping phaseout program into such progressive state legislation as now exists in New York, where it is mandatory that 75 percent of wastes generated in the state be used in some kind of resource recovery scheme by 1985.

All municipalities with ocean dumping permits for their sludges have been afforded the opportunity of using construction grant funding for putting into effect land-based alternative disposal methods. Most have chosen that path. When Camden, NJ officially stopped dumping its sewage sludge in the ocean at midnight, June 15, it became the first major city in the country to use composting as an alternative to ocean dumping its wastes. Region II funded 75 percent of the $3 million needed to plan and build the project, which processes the city's total daily sludge output. Most of the New York and New Jersey municipalities still dumping sludge in the ocean are considering composting in one of a mix of alternatives to the practice.

If compliance schedules are not met in the facility planning, construction and implementation of sludge management alternatives, the Region has been taking the appropriate enforcement actions.

The number of industrial dumpers in the Region has dwindled greatly over the years, and those still dumping their wastes have adhered to the phase-out dates on their renewable one-year permits, as have the companies on a single three-year special permit to dump.

While discussing coastal water quality in Region II, it seems appropriate to mention here that crewmen aboard Exxon's Glomar Pacific began drilling the first oil well off the East Coast on March 29, launching the exploration of an undersea tract that could yield huge reserves of oil and natural gas. The ten oil companies involved in the exploration work protested conditions they considered too stringent in their EPA discharge permits for the drilling rigs. Region II denied their request for hearings because I found the provisions of the permits sound and could see no technical basis for changing those conditions. We intend to do our utmost to ensure that the marine environment of the outer continental shelf is protected, despite high investment and hope on the part of companies and the public that East Coast oil and gas will mean energy harvested at home in the years ahead. We intend to prove that the two goals can be and are compatible.

Combined sewer overflows, one of the most pressing water problems for the major cities in the Region, is pinpointed in the NYS/EPA Agreement as needing concerted federal and state attention. New systems must be built and existing systems upgraded. Opportunities for more effective use of beach facilities exist in many parts of New York and New Jersey, including the Great Lakes, as a result of adequate control of these urban wastewaters.

The principal environmental problem associated with hazardous and solid waste disposal is water quality degradation. Linking together the management of wastes and the protection of drinking water sources is also high on the NYS/EPA Agreement priority list. Through the strategies outlined in the agreements we intend to bring the financial resources of the Clean Water Act to bear more effectively on solid/residual waste problems as a supplement to the authorities and resources available under Resource Conservation and Recovery Act (RCRA).

Region II is participating in the planning of resource recovery elements of the South Bronx redevelopment project, including refuse-to-energy facilities and is helping to revive a New York City-sponsored source separation of garbage program. In Puerto Rico, Region II has helped the Environmental Quality Board to establish a Source Separation Task Force to complement the island-wide Solid Waste Authority which is being organized under new legislation. An EPA consultant is organizing a resource recovery feasibility study for the U.S. Virgin Islands. Energy recovered from refuse there may be used for desalinization of seawater to provide potable water supply.

The 1977 Clean Air Act Amendments significantly increased the responsibilities of all levels of government to control air pollution. Region II is drafting a NYS/EPA Agreement on air quality management in order to maximize productivity in the coordinated strategic approach between various levels of government that is so essential. The Agreement has gone through the initial stages of development and is expected to be in final form around mid-February 1979. It is attempting to:

Identify the course of existing or potential air quality problems and define the methodology for tracking future progress,

- describe the development and implementation of a management program to solve the problems identified in the air quality management assessment,
- address the interface with other media (i.e., water, solid waste), and

• address the strategy for ensuring a coordinated effort among federal, state and local governmental institutions to implement an effective air pollution abatement program.

New York Governor Hugh Carey, New York City Mayor Ed Koch and I have signed a memorandum of understanding that defines how the city's 1978 Transportation Control Plan (TCP) will be revised to conform with the Clean Air Act Amendment of 1977. The memorandum commits the three parties to adopt a work plan for carrying out the revision, to involve appropriate governmental agencies and nongovernmental representatives in the process and to include air quality considerations in all transportation planning.

The great majority (approximately 94 percent) of the 745 major stationary sources in New Jersey have come into compliance with SIP requirements, and most of those which remain out of compliance are only in marginal violation. Region II intends to relax the state's SIP requirements as they pertain to the glass industry because the action will not interfere with the desired attainment of air quality standards. New Jersey is now formulating a revision to the SIP which will increase its ability to control the emission of hydrocarbons. Concurrently, Region II intends to implement the many regulatory requirements of TSCA and RCRA to control the introduction of hazardous pollutants into the environment.

Ninety-two percent of the major stationary sources in New York are in compliance with the SIP and applicable federal regulations. Region II and the state's Department of Environmental Conservation confer on a formal and frequent basis to establish a coordinated strategy for enforcement.

The Regional Office of Toxic Substances has been developing an integrated toxic substances control program that encompasses all EPA media programs. Included in the integrated approach are coordinated response to crisis incidents; coordinated review of toxic related aspects of media programs; identification, assessment and prioritization of toxics of concern; acquisition and evaluation of information relative to toxics in the environment; magnitude of exposure, sources, cause-effect relationships, intergovernmental cooperation, as well as public participation and awareness.

The regional staff played a key role in responding to the Love Canal disaster, providing expertise when needed, marshalling regional efforts to assist the City of Niagara Falls and the State of New York, and providing analytical and technical equipment and experts for both environmental and health studies in the area. During the mysterious cancer cluster scare in Rutherford, NJ, staff in the Regional Office of Toxic Substances provided state experts and federal researchers with data essential to their exhaustive, 4-month investigation. The investigators were not able to confirm a specific cause for the disease, and the incident remains a mystery.

Region II's Office of Toxic Substances will hold a joint workshop in March with Environment Canada, New York Department of Conservation, the International Joint Commission, and the Great Lakes Basin Commission dealing with the many issues of mutual concern associated with toxic substances control in the Great Lakes. It will be the first in a series of such workshops. The endeavor is endorsed by the Water Quality Board of the International Joint Commission.

Report from Region III

JACK J. SCHRAMM
Region III Administrator

During my first year as regional administrator I have come to realize that one of our basic problems, and indeed a problem inherent in most regulatory agencies, is that we continually find ourselves in adversary relationships with one faction or another. What is really unfortunate about this, is that we seem to be at odds with our friends as often as we are with our detractors. I am speaking specifically about our relations with state governments and with the citizens at large.

Cooperation between EPA and the states has been a well traveled theme. Most of the federal laws which EPA administers call for states to assume primary authority over many important environmental programs. Since its inception, Region III has delegated many of these programs to the states. Perhaps the most important recent delegation was that of the NPDES wastewater discharge permit program to Pennsylvania. Since the Commonwealth contains over half of point source discharges in the Region, this delegation was a big step forward.

However, we still have a long way to go. Many programs still remain to be delegated. But perhaps even more important, is the development of comprehensive agreements between EPA and the states which will help to integrate and coordinate many antipollution activities that are now fragmented. This fragmentation has been the cause of a great deal of wasted time and resources. An integrated and coordinated approach will not only help us save citizens' tax dollars, but also helps improve our ability to attack many environmental problems.

Negotiation of these comprehensive EPA/State Agreements is a national priority with the Agency, and Region III has already taken several steps on its own which should help in this effort.

At the beginning of the year I ordered a major reorganization of all those Regional staff positions whose main purpose it was to interact with the states and the public. I have called this new organization the Office of Intergovernmental Relations and Public Awareness (OIRPA).

One of the major innovations of the reorganization was the creation of a program officer position for each state in the Region. The state program officers are senior level staff who are responsible for liaison with state and local elected officials and officials of the state environmental agencies. Their most important role will

be to help integrate the activities of various EPA programs and divisions whenever necessary in their states. I believe that they will help to increase cooperation between EPA and the states and provide both of us with the up-to-date information we need in order to make decisions that are acceptable to all.

In developing the EPA/State Agreements, we will concentrate on several vital programs. These are the control of toxic substances, the redevelopment of State Implementation Plans, and improvement of state capability to administer the EPA Construction Grants Program and the development of Water Quality Management Plans.

Toxic substances have become our number one environmental problem in recent years. Almost every day we are being confronted with toxic time bombs which have just blown up or are about to do so. In order to control this problem effectively it will require us to integrate several existing programs including the NPDES permit program, certain authorities under the Safe Drinking Water Act and the Resource Conservation and Recovery Act (RCRA), industrial pretreatment of wastewater, plus several others. The states already have substantial experience with many of these programs except RCRA, which is yet to be fully implemented. Consequently, we will concentrate a good deal of effort on getting the states to accept responsibilities under this Act.

Two years ago Region III, consulting with the states, reviewed all State Implementation Plans (SIP's) and found them to be inadequate to ensure that national air quality standards could be attained or maintained. In the meantime, the Clean Air Act Amendments of 1977 required that all areas which are not meeting air quality standards would be required to revise their SIP's. In Region III this is a massive task, and some of the states will have to make some hard choices in order to meet the Congressional mandate. We expect to work closely with the states in this effort.

EPA's Construction Grants Program is one of the largest and most important of all Agency programs. It allows communities to build vitally needed sewage treatment facilities, and is the source of many thousands of jobs. But the size and complexity of this program also makes it a great drain on EPA administrative resources. Therefore, we are working towards implementation of a new amendment to the Clean Water Act which will give more money to the states so that they can assume more of the administrative responsibilities.

Water Quality Management Planning will help determine where and when facilities will be built under the Construction Grants Program. Proper implementation of this program will help to ensure that the grants program is administered in the most cost effective and environmentally sound manner as is possible.

Other aspects of the EPA/State Agreements will be the improvement of several support-type activities. One of the most important of these is environmental monitoring. Monitoring is a necessary basis for many of the technical decisions in other programs. We will also improve our cooperation with the states on general enforcement activities and will provide them with special technical assistance through our R&D program.

While relations with the states are important, we have not forgotten our responsibility to improve relations with our other constituencies. In order to strengthen the role individual citizens can play in the decisionmaking process, we are in the process of upgrading our citizen participation efforts. We will make additional attempts to inform citizens early about important projects or rules that might affect them. We will give them adequate opportunity to make their views known through public meetings, letters and other forms of communication. Finally, we pledge to carefully consider all citizen comments in our decisionmaking process.

Mindful of the need to minimize adverse economic impacts of our activities, we are strengthening our ability to help businesses that wish to locate in the Region. We have appointed a new source coordinator who will act as the liaison between new businesses and the Agency. This coordinator will be able to tell a business executive which environmental permits and reviews he will need in order to do business, and then will ensure that the Agency completes its review of new source applications as expeditiously as possible.

As you can see, I have set forth many challenges for Region III in the coming year. My staff and I are ready and eager to address these challenges, and we invite other realistic and caring elements in our society to join forces with us in this effort.

Report from Region IV

JOHN C. WHITE
Region IV Administrator

Problems arising from the use and misuse of toxic substances will command much of our attention in coming months. Major toxic "incidents" seem to be continuing. For example, just when Louisville was about to rid itself of contaminated sewers, the State of North Carolina was forced to deal with more than 200 miles of roadway saturated with PCB's.

Again in 1978, there were more reported spills in Region IV than in other parts of the country. Many of the more serious incidents were the result of train derailments. Spill response always has been a major activity in the eight southeastern states. In all probability response and prevention activity will increase during the coming year with more emphasis on spills of hazardous materials.

In 1979, we'll be seeing more cities in the Southeast turn to automobile inspection and maintenance programs to bring about reduced levels of hydrocarbons and carbon monoxide. Louisville, Tampa, northern Kentucky and Atlanta have voluntary I&M programs underway. In the offing are similar programs for Columbia, SC; the south Florida counties of Dade, Broward and Palm Beach; also Davidson (Nashville)

and Shelby (Memphis) counties in Tennessee.

Reviews of new sources of air pollution will increase substantially as the 1977 Clean Air Amendments are implemented and the southeastern states continue their rapid industrial growth.

Intensive activity will be required by Region IV's staff and state agencies in order to complete approval of SIP revisions before July 1, 1979.

We're looking for an increasing number of environmental impact statements in Region IV, including site specific statements for new phosphate mines in Florida. A draft EIS on the phosphate industry calls for the elimination of slime ponds, suggests the rock drying process be eliminated, and says prime wetlands should not be disturbed. Florida is the major phosphate-producing state in the nation.

A noise abatement and land use study of Atlanta's Hartsfield International Airport (the world's second busiest) is expected to be completed in 1979. Using an earlier survey as a starting point, the new study, ordered by the city, will look at a broad range of operational alternatives designed to bring about noise abatement.

Coastal areas are a prime concern in Region IV. Six of our eight states have coastlines totaling more than 2000 miles. As offshore drilling activities increase, the development of onshore facilities will surely make the job of protecting wetlands and estuarine areas more difficult.

Coming up, we probably will be studying for the first time a proposal calling for direct discharge of treated municipal wastewater to the Gulf of Mexico. This would, no doubt, call for the preparation of an EIS in which all disposal options would be considered.

More farmers use more pesticides in the Southeast than in any other region. Some pesticides in our region are misused. Region IV inspectors in FY 78 made more than 160 investigations. Each involved human health effects. Over the next year we will be delegating more of this investigatory function to the states.

At this writing, a federal judge's decision is pending on Ferriamicide, the Mirex replacement developed by the State of Mississippi for control of fire ants. The Environmental Defense Fund had sought an injunction prohibiting use of the new chemical. EPA feels Ferriamicide shows much promise. It degrades rapidly and does not persist in the environment. It would be used under tight controls.

Construction grant activity will continue at a pace similar to FY 78 with expected new awards to total $330 million and outlays amounting to $460 million. We expect to make 27 Step 1 grants, 106 Step 2 grants, and 115 Step 3's. Major emphasis will be placed on quality assurance and new requirements of the 1977 amendments, such as innovative and alternative technology. We'll also work on getting the backlog of Step 3 projects under construction.

We will continue to delegate some construction grant program functions to the states. Georgia will be the first.

The EPA/Corps of Engineers agreement to assist in review and inspection of construction aspects of the construction grant program should be fully operational in FY 79.

In water supply the emphasis will be on developing strong management programs in those states which have assumed primary enforcement responsibilities. Seven of the eight southeastern states have assumed this responsibility, and we hope the eighth (North Carolina) will in FY 79.

In the 208 program I believe we'll see the completion of initial planning efforts and the initiation of continuing planning process grants to state and areawide agencies. Many water quality problems were addressed with the initial 208 grants, but specific needs still exist in many areas.

Also, the Region will work toward the integration of program planning requirements of various environmental control programs through negotiation of State/EPA Agreements.

An integral part of all our efforts will be an increased emphasis on public participation. Active citizen involvement is an absolute must. We'll do our best to bring this about.

Report from Region V

JOHN McGUIRE
Region V Administrator

Air pollution and hazardous waste problems led the priority list in Region V this past year.

Region V encompasses America's industrial heartland—Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.

A major issue climaxed on August 22 when nearly 3000 miners in the Ohio River Valley attended a hearing to voice their concerns about Ohio utilities use of out-of-state coal to meet clean air standards. There were strong concerns that over 15,000 miners could lose their jobs if a switch by utilities to Western coal was allowed.

A series of hazardous waste disposal crises also occurred in the Region. In Wilsonville, IL a judge closed down a major Midwestern Disposal facility used for PCB burial. In Mio, MI, strong local opposition developed over proposed disposal of some 5000 head of cattle that contained trace amounts of PBB's. In the Twin Cities, citizens turned out in the thousands to reject siting of a model hazardous waste landfill, to be paid for mostly with EPA funds. A new treaty was negotiated for the Great Lakes between U.S. and Canada which calls for new emphasis by both countries in controlling toxic dischargers.

As of September, 25 of 32 local planning agencies in the Region turned in completed plans for water quality management (208). In the coming year emphasis will be on state agency planning.

Also, as of early autumn three states in Region V had requested new delegations allowing them to ad-

ministrate major phases in the construction grants program. Those states include: Illinois, Indiana and Ohio.

Regional compliance figures for 1978 through September showed that 80 percent of 550 major industrial dischargers have facilities built to meet state cleanup requirements in the Region.

A major thrust in the air pollution effort in the Midwest was designation of nonattainment areas for air pollutants. Since those designations, Region V states have been busy at work developing new state implementation plans, most of which heavily emphasize controlling ozone from automobiles through auto inspection and maintenance programs.

The state implementation plan revisions also are taking into account rules governing the prevention of significant deterioration. Region V states, concerned about future growth, have been asked to develop plans that will both meet standards and allow for future growth.

To better help the public, the Regional office began publishing this year a biweekly "tip sheet" called the Public Participation Printout, to alert interested persons of upcoming agency activities, events and decision points. Nearly 6000 persons receive the document each month.

A two-year surveillance study of Lake Michigan was released by the Region's Great Lakes office in the spring. The study showed that in the last decade Lake Michigan has been showing increasing evidence of eutrophication. And, while measurable improvements can be seen in the nearshore waters of the lake, the open waters are still showing the impact of decades of heavy pollution. Because of a phosphate detergent ban in Indiana, phosphorus levels at the lower end of the lake have dropped dramatically, but overall salt levels in the lake are continuing to rise. PCB levels have not increased since 1976 and there is some indication they are declining. DDT levels have fallen to 10 percent of their 1969 levels. At the same time, the Region began a new two-year study of the open waters of Lake Erie aboard its new research vessel, the Rachel Carson, a former Vietnam gunboat from the Navy. A second EPA vessel, the Roger Simons, began studying the nearshore waters of Lake Erie.

A new, $3 million environmental testing lab was dedicated in February. Called the Central Region Laboratory, it is one of the best equipped environmental labs in the Midwest and handles a wide range of analytical work, including testing on toxic substances. Following a chemical plant explosion last August, the lab even ran tests for the Food and Drug Administration of pizza samples from a restaurant downwind from the explosion.

In a major enforcement action, the Region filed suit in Federal District Court in Chicago against Outboard Marine Company demanding the company remove from the North Ditch and assess removal from Waukegan Harbor of about 600,000 pounds of PCB-laden sediments.

The Region also denied approval to the Indianapolis Power and Light Company's request to build a 1950-MW coal-fired power plant along the Ohio River near Rockport, IN. It was the first denial of such a request in the Region.

Region V in August authorized a $709 thousand grant to the State of Ohio for its water pollution control program. That grant had been withheld previously because of concerns over the adequacy of its water enforcement plan. An upgraded enforcement program was agreed to by the state in August.

A major enforcement action was taken by the Regional office against 12 federal facilities accused of air and/or water pollution activities.

During the year, sixteen cities in Region V adopted new antinoise ordinances with the help of the Regional office. National news attention focused on Galena, IL which enacted a tough new ordinance cracking down on motor vehicle noise.

The Region's environmental impact reviews raised concerns over a highway development on wetlands in southern Wisconsin, a new steel facility in northeastern Ohio, and expansion of a coal pit in downstate Illinois.

Important issues for the coming year in Region V will continue to be in the air pollution and hazardous waste areas. The major regional effort will be in supporting state agencies as they work to deal with existing air pollution problems and the potential impacts on air quality of economic growth.

Report from Region VI

ADLENE HARRISON
Region VI Administrator

As I look back on the past year in Region VI, I am reminded that there are no absolutes in life—many events in the Region seem to have been contradictions of what some of us expected and, in some cases, the paths to decisions have seemed obscure. The decisions have had endless ramifications. I am sure these facts are as true elsewhere in the country as they are in the five-state area of federal Region VI.

Region VI is an enormous area of 550,000 square miles covering 15 percent of the land area of the United States. Traveling distances within the Region are often staggering.

There are over 20 million people here, and that number is increasing at a rate approximately double the national average. The Region is an environmental microcosm, with mountains, prairies and shores.

This is the leading Region in energy production and balancing that production with environmental harmony and the protection of human health and well-being is an ever present challenge.

Protecting and improving the quality of water here is particularly important to us. Along with the long stretch of coastline and the many underground drinking water sources, the Region has the predominant portion of the nation's wetlands that are an integral part of the food chain. As noted by President Carter recently, we

are losing 300,000 acres of wetlands annually in the nation. Microscopic plants and animals thrive in the wetlands forming the base of the food chain, of which man is the ultimate consumer. Therefore, controlling water pollution in each of these areas is essential.

To continue the positive steps to control water pollution, Texas was the second state in the nation which was delegated administrative responsibility by EPA for the management of its wastewater treatment facility construction grants program. Over 100 state jobs will be created by this delegation, freeing the Region EPA staff to concentrate on other urgent program needs.

In other similar action, EPA negotiated an agreement with the Corps of Engineers in March of this year which provides that the Corps will assist in the review and inspection of the construction of new wastewater treatment plants. Region VI was the pilot Region for this effort. The three major tasks the Corps will perform are: (1) reviewing plans and specifications prior to bidding ("constructability and bidability reviews"), (2) insuring that EPA-approved projects are bid, contracted for, and constructed in accordance with the highest standards of the construction industry; and (3) providing continuous on-site presence on projects costing about $50 million or more.

The development of a sound, workable areawide water quality management plan is difficult at best—but it can be done. Only a year ago, the development of the Oklahoma Indian Nations Council of Governments areawide plan was in difficulty, and few seemed to be able to agree on a solution. The council, by working closely with the public and elected officials, turned itself around and now has the distinction of having the first state-approved plan. We are looking forward to approved plans from all parts of the Region in 1979.

Water, below the surface, is also of concern in this Region. We are concentrating on delegating the prime responsibility to each state for the Underground Injection Control Program, and anticipate this delegation will be made to each state by the end of 1979. To achieve this goal, we are working with the states to obtain the regulatory changes and enabling legislation as needed. Total public participation in the process will be assured in line with our commitment to full public awareness and involvement in environmental issues.

The public will also play an increasingly important role in our Wastewater Treatment Facility Construction Grants Program. Increased public participation will be sought by dissemination of information to the media, by making information readily available to various citizen advisory committees, workshops and public meetings and hearings, and by special mailings to specific groups. We believe that active public participation is the base upon which we will achieve Regional environmental goals.

We have addressed the first round of major problems in water quality in the Region and that work will continue. We are presently addressing the way to solve the air pollution problems in the Region. Through increased intergovernmental cooperation and planning, we are beginning to see successes with the Emission Offset Policy which provides for reduced air pollution since new polluting sources must demonstrate that pollution from other sources in the area are reduced by at least an amount greater than the new source would pollute.

In the forefront, the Texas Air Control Board is implementing Congressional requirements for emission offsets in Texas. In addition, hard work by several government agencies and industry made possible the identification of the necessary pollution offsets to allow new automotive plants to be built in Louisiana and Oklahoma. This has demonstrated that continued growth, with environmental protection, is possible. A willingness to make the program work and close cooperation are the keys.

A major job in the Region this year undoubtedly is the development of approvable air quality State Implementation Plans (SIP's). The extraordinary industrial growth in the Region and large population increases make the job of achieving and maintaining good air quality difficult. The rapid growth of urban areas in the Region and the resulting air quality impacts must be carefully considered when the states develop air pollution control plans. These plans will include transportation control measures and automobile inspection and maintenance programs where they are necessary.

We are anticipating major progress in controlling air pollution through increased cooperation with the states and the implementation of new technology and control techniques.

While we are involved in the challenges of developing additional energy and ensuring that the environment is protected in the process, the industrial boom requires that we be constantly involved in minimizing the environmental impacts of increased industrial growth, particularly in Louisiana and Texas where special attention to the coastal zone management and wetlands protection is required. We are continuing to develop more effective and efficient systems to measure the environmental impacts of proposed projects. We are also streamlining the handling of applications for dredge and fill permits, the issuance of Prevention of Significant Air Deterioration (PSD) permits, and the handling of National Pollutant Discharge Elimination System (NPDES) permits by increasing the role and responsibility of the states.

We are initiating new approaches to coordinate and manage environmental programs in order to increase our effectiveness, and we will closely coordinate our activities with state and local officials and other agencies, with great emphasis on involving the public.

In line with the directions of the President, we intend to respond to citizen needs quickly, courteously and completely. One of our top priorities is firmly cementing faith, trust and credibility, and we seek the same spirit of cooperation from the states and the public in the Region. Our goal is that Region VI and its people will be national environmental leaders.

Our activities are geared toward this goal. The tasks are complex, but, because of the industrial growth in the Region, we must and will meet the environmental challenges head-on.

Report from Region VII

KATHLEEN CAMIN
Region VII Administrator

Most people don't understand what is going on in the environment today. They look around and see enormous environmental problems—smog, trash, toxic chemicals and pollution—created by a world of big business, big institutions and big government. These problems are even more difficult to understand when people working on them use a scientific-technical language that few people really understand.

The people who work in the Environmental Protection Agency have sometimes been cut off from the citizens they serve by the magnitude of the task of cleaning up the environment. We have changed that. EPA today is trying to bring the two together. We are concerned that people know what is going on and what they can do to help clean up the world in which they live. We need their help. In fact, it is the only way that we can really achieve our goal. We call this public participation. Very simply, it means communication between EPA and the public.

Everyone is aware of the problem. Bureaucrats worry about disappearing into a fog of MOL's, I/I's, AZMA's and red tape. Citizens worry that the quality of their air, water and land will deteriorate before they find out who to talk to about it. How do you get the government and the people together?

To overcome the jargon and the problem of citizens getting through to the people they need to, a new communication channel was established—a toll free Environmental Action Line. Calls began to flow in. Because the Action Line filled a need, calls soon multiplied, sometimes 30 to 50 a day. The person answering the Action Line tries to handle as many of the calls as possible. In some cases, all of the caller's questions cannot be answered by the Action Line Operator. If this should happen, the Action Line Operator searches for the right person in EPA or goes to the state or local government agency that could best solve the caller's problem. The Action Line has handled calls on everything from airplane noise to sewer odors.

A good example is the call from Nancy McConnell. Nancy was upset, worried and bewildered by the situation at her parents' farm. Her parents had been forced to move, cattle had died, a great deal of money had been lost and her mother was suffering from possible lead poisoning. The family felt that oil and gas runoff from a nearby truck stop was causing the problem. But how to get action?

Nancy heard about the Environmental Action Line and decided to give it a try. When the phone call was received at the Regional Office, it was immediately referred to the Region VII Emergency Response section, which began work. The State Department of Environmental Quality and local officials were alerted. Two members of the EPA Region VII staff went to solve the problem. They found that the creek was contaminated with oil from the truck stop parking lot. The oil had accumulated over the winter. When the snow melted, it washed the oil from the parking lot into a ditch. The ditch carried the oil to a creek which flowed across the McConnell property. Action to clean up the creek began immediately. The result was a successful removal of the oil.

Not all the results have been this successful, but many of the problems can be solved in short order and all are followed up.

EPA is able to help many people in this way, but we have also received an unexpected environmental bonus from the Action Line. People are helping us. They are reporting environmental violations ranging from the tampering of automobile pollution control devices to chemical spills. The Environmental Action Line has become a source of two-way communication which promises to help Region VII clean up the environment.

In areas where specific groups have an interest in technical subjects, Region VII is trying other new approaches. A group of interested and knowledgeable farmers is lending its knowledge of agriculture and farm situations and has joined with EPA personnel to form a working group. This exchange helps the Region to work for realistic regulations in rural areas.

When EPA was forced to assume primacy for water supply in Missouri, city officials had a difficult time with new forms and regulations. Eight workshops were set up across the state and all water suppliers were invited to attend.

Regional water supply personnel discussed the new situation in depth. Representative operators appeared on the program and asked questions. As a result, the operators understood the law better and the quality of their reporting improved. The EPA personnel came away with a good understanding of the operators' problems.

Because of the deep interest of city councils, civic clubs and environmental groups in how air quality regulations affect their community's future, Region VII has established a pool of speakers on the Clean Air Act. This group is drawn from all fields but is specially trained by the air pollution staff. These speakers will eventually talk to all interested groups on the vital need for clean air and what is needed to clean it up.

The communication problem is still ahead of us. The toxic effect of minute quantities of pollutants over a long period of time must still be explained. Complex water pollution trade-offs must be made understandable. EPA still is heavily working in many very narrowly specialized technical fields which almost defy communication. However, Region VII strongly feels that the Environmental Action Line and other public participation efforts are a good start. While serving the people of the Region, we are also able to see better their first-hand reaction to environmental issues. This clarifies our thinking on priorities and methods. Quite often too, we find that people want to help clean up the environment—all they need is the opportunity.

Report from Region VIII

ALAN MERSON
Region VIII Administrator

As we forecast in our last year's report to POLLUTION ENGINEERING Magazine, 1978 was a year of progress, of focusing of issues and of tough decisions. Already, the difficult issues of 1979 and beyond are beginning to take shape and in an atmosphere of reduced resources at the federal level.

Easily the most intractable environmental problem in the region is the battle to reclaim clean air in the Denver metropolitan area. More than a million people in the area are exposed to health-damaging levels of primarily auto-related air pollutants with a chilling frequency. The past year, however, saw substantial movement toward solutions.

Efforts of federal agencies to reduce their employees' contribution to the problem merged with strategies being developed by the state and local governments. Most importantly, the business community and citizens groups launched efforts of their own.

In May, President Carter pledged his personal support for Denver's clean air program and announced the availability of some $42 million in federal assistance of various kinds.

Candidates for local offices in the recent elections were closely questioned regarding their positions on the air quality solutions.

At this writing, the state is preparing to hold public hearings on revisions to their State Implementation Plan—revisions designed to show how standards can be met in the Mile-High City during the 1980's. If we are accurately judging the support of Denver area residents, they will insist on a plan that will work, bringing us one step closer to being able to write the "Denver Air" success story for POLLUTION ENGINEERING.

Partly as a federal complement to the state's planning for air quality and water quality, we completed a comprehensive impact statement in 1978 establishing a link between EPA construction grant funds for wastewater treatment projects and air quality and land use in the metro area.

To continue to fund projects without examining those interrelationships would be an unconscionable waste of tax dollars and an abrogation of federal responsibility.

In fact, we devised a set of criteria which will guide our funding decisions on construction grant applications.

Among those criteria are requirements for metro communities to participate in the planning and implementation of the metro clean air plan, to limit plant capacity and sewer taps consistent with population projections agreed upon by the local council of governments, to tie plant service to contiguous development, reducing leapfrog development and other ideas to promote appropriate and innovative technology.

Working with local governments to achieve such mutual goals is one of the most exciting challenges facing the regional office during the coming year.

These first examples of regional activities have concerned primarily the cleanup of past or existing pollution problems. But aside from its relatively few major urban areas, this is a rural region with broad expanses of clean air. It is an arid region where many of our streams have escaped serious pollution.

In such areas, the responsibility for preventing environmental degradation becomes ever more important, as the region strives to share its vast energy resources with the nation.

Thus, the task facing the entire region is to balance the nation's energy needs with the needs to protect agricultural production in the West and to protect values and lifestyles representing an important component of the American character.

National attention focused on that balancing act in 1978 when this regional office denied crucial environmental permits for the proposed construction of two huge coal-fired power plants in southeastern Montana, at Colstrip. Based on exhaustive analysis of meteorological data and modeling, we concluded the units, if built as planned, would violate allowable increments of sulfur pollution on the nearby Northern Cheyenne Indian reservation. That reservation enjoys Class I air quality under the Clean Air Act's prevention of significant deterioration policy. The allowable pollution increases are tiny indeed, far more stringent than those allowed where only national standards must be met. The issue is not yet firmly resolved. Administrative and legal reviews remain. It serves as a pointed example, though, of the difficulty of decisions facing all of us as we attempt to accommodate a variety of needs, values and viewpoints.

In Region VIII, we pursue that spirit of accommodation. To facilitate it, we have established a staff office in Helena, MT, and hope to establish similar offices in our other regional capitals, bringing our services closer to the people for whom we work. We will be working to turn over to the states the programs which Congress intended to be run by the states, by far the bulk of environmental regulatory programs.

It has been our experience that misunderstanding increases with distance. It is my intention to cut down those distances, not just the geographical ones, though they are important, but also the "psychic distances" between people who perceive themselves on different "sides" of environmental issues. In the past year, we have markedly expanded our Office of Public Awareness and Intergovernmental Relations, a major part of whose job it will be to reduce the distances between people and shore up the conviction that environmental improvement and protection are necessities toward which we should all work in good faith, not elitist luxuries for us to quibble over.

We are keenly aware of the critical importance of solid engineering in our quest for environmental quality and invite your continued support in this most important of tasks. Together, we can earn the gratitude of tomorrow's generations.

Report from Region IX

PAUL DE FALCO, Jr.
Regional IX Administrator

As in EPA's other regions, Region IX's programs and operations during FY 79 will be based upon the national priorities established in Washington. Those priorities are as follows: (1) protection of public health; (2) enforcement of the law; (3) integration of state/local/EPA environmental programs; (4) management and regulatory information. However, authority for development and implementation of programs in EPA has been extensively delegated to the regional administrators. There is, therefore, sufficient flexibility that program emphasis within each region may reflect the needs and requirements that are peculiar to that region.

The rationale Region IX used in ranking its programs while embodying the above priorities can best be stated as follows:

1. State/local governments are closest to the problems and consequently are the most effective units of government to carry out federally mandated environmental programs where (a) they have the basic interest and desire, (b) there is compatibility between goals of federal/state statutes, and (c) they have the resources to carry out the program.

2. Given this then, EPA programs should be managed to (a) support/assist and develop state/local programs, (b) effectively integrate the often separate media programs, and (c) provide direct program operation where state/local programs are lacking or ineffective.

Following this rationale, Region IX has ranked its programs for FY 79 to ensure that programs within the following three functional areas are funded adequately to carry out effective operations.

These provide direct support for federally mandated programs. Priority is given to developing and supporting those programs directly related to public health protection—drinking water, air and hazardous waste. First priority is being given to development of nonattainment plans, evaluation and revision of transportation control plans. Additionally, the construction grant program is accorded the same high priority because it provides both support for strengthening state programs and direct cleanup of public health related water quality problems. This takes on an added dimension of importance in Region IX, which is generally water limited because of water resource related issues.

This includes the water quality management, air quality management, hazardous waste management, and drinking water programs. In Region IX these are principally aimed at developing the regulatory base for effective enforcement through state/local government and integration of the various media programs both at the state and federal levels. These programs are designed to assist and strengthen the state/local institutional capability to manage total environmental programs in cooperation with EPA. They provide the primary mechanism toward achieving state/EPA Agreements that encompass a total environmental program. Permit issuance and reissuance (both air and water), development of local pretreatment programs, integration of permit programs, and development of California air emergency episode plans are leading priorities.

Where state and local programs are inadequate, even though both technical assistance and financial assistance via program grants have been provided, direct EPA operation of programs will continue to be implemented. This will be primarily in the functional area of enforcement. Enforcement priorities for FY 79 have been given to those programs having the greatest impact now on public health protection; i.e., those where rules, regulations and permits are in effect and enforceable. These include stationary source, water and pesticides enforcement, hazardous material spills, and permits (NPDES and dredge/fill). The other programs such as drinking water, toxic and solid waste, while extremely important, are accorded a lower priority for FY 79 since they are just now being developed and will not have the impact of established programs.

The national priorities give us a realistic basis for making progress this year in areas where progress not only needs to be made, but can be made, while laying the groundwork for progress in other areas next year.

Report from Region X

DONALD P. DUBOIS
Region X Administrator

The number one challenge facing Region X is for EPA and state pollution control agencies to develop, adopt and implement effective air pollution control strategies that will enable Alaska, Idaho, Oregon and Washington to achieve the goals set by Congress when it enacted the Clean Air Act Amendments of 1977.

A key measure of progress to be made during 1979 will be to get on the books workable State Implementation Plan (SIP) revisions to achieve clean air in areas of the four Region X states where a total of 37 nonattainment designations were made last year.

First and foremost, EPA's chief criterion in approving those revisions will be whether those plans contain assurance that air quality standards will be met and maintained. But EPA will also examine those plans in terms of how well they reflect citizen involvement in their preparation and how well those plans acknowledge other environmental considerations.

Compromise will have had to be reached, and conflicting interests will have had to be balanced for those plans to succeed.

Spokane, WA offers an illustration of how revised

SIP's will have to take into account a variety of environmental, social, public health and economic issues.

The Spokane SIP revision process is complicated. What makes it so is that a number of pending decisions—related to local zoning, the construction of a new freeway off-ramp and on-ramp, protection of drinking water, and the building of nearby sewage treatment works—carry just as much importance as does the concern that proposed industrial and residential growth in the area may cause frequent violations of national ambient air quality standards for carbon monoxide.

In Spokane, careful consideration must be given to drinking water because of EPA's designation last year of the Spokane Valley-Rathdrum Prairie Aquifer as a sole source drinking water aquifer. The Spokane designation meant that any construction project receiving federal financial assistance that has the potential for polluting the aquifer will be subject to a special EPA review to make sure such contamination does not occur. This review includes highway construction, multiunit housing development and municipal sewerage facilities built under EPA's own construction grants program—exactly the types of construction that are being considered in the area east of Spokane.

The challenge for EPA, in evaluating whether to approve the revised SIP for Spokane, is to avoid making decisions that would adversely affect the Spokane area's underground drinking water supplies and—what's more—to consider whether any contemplated EPA action (like the decision to go ahead with the new sewage treatment works nearby) will create leapfrogging development that might be inconsistent with local land use policies or that might defeat the clean air intentions of the SIP itself.

The need to integrate EPA's various environmental programs holds true not just in Spokane, but in other parts of Region X as well. The problems faced in the Pacific Northwest and Alaska transcend those associated with only air, or water, or pesticides, or noise, or radiation, or solid waste. They cannot be addressed on a one-at-a-time basis, each in isolation from the other. Nor can they be addressed by EPA attempting to work one-on-one with pollution control agencies at the state and local level. The problems, if they are to be solved, need to be addressed by EPA and its state and local counterparts in consultation and partnership with other agencies of government outside the pollution control field, with economic interests directly affected and with citizens concerned with preserving the amenities of living in the region.

In the case of Spokane, recognizing that the issues cross jurisdictional boundaries, and involve other federal agencies, units of state government, and elected and appointed officials at the municipal and county level, EPA is attempting to bring about solutions through the two-year assignment of an EPA staff person to the mayor's office in Spokane. Details of the arrangement, to be worked out through negotiations with the mayor, would provide for the EPA assignee to serve as a coordinator between all the city, county, state and federal agencies that are trying to find compatible solutions to interdependent problems.

Similar intergovernment and interdisciplinary approaches, modified to fit individual circumstances, may have to be used in 1979 as EPA and state and local pollution control agencies address such top-priority items as these:

- Adoption of transportation control plans to reduce air pollution from automobiles in Boise and Anchorage, the two new cities in the region (Seattle, Spokane and Portland were already on the list) that must develop such plans.
- Adoption by the forest products industry of a best management practices approach to solving air and water quality problems associated with timber harvesting.
- Helping landfill operators along the Pacific Coast, where rainfall often amounts to more than 100 inches a year, meet EPA criteria intended to prevent the leaching of harmful chemicals into groundwater, or nearby lakes, rivers and streams.
- Implementing the first phase of a toxic substances control strategy that will lead to a program that will coordinate the statutory requirements of the Toxic Substances Control Act, the Resource Conservation and Recovery Act, and the industrial pretreatment and hazardous materials provisions of the 1977 Clean Water Act.
- Encouraging local communities to adopt resource recovery programs that will enable them to participate in the Resource Recovery Implementation Grant Program.
- Helping local sewerage agencies build community sewerage systems where good sense shows they will do the job as well as or better (and at less cost) than conventional sewage treatment plants.
- Assisting growers and others in agricultural areas implement measures identified in 208 plans to reduce nonpoint source water pollution.
- Establishing a Prevention of Significant Deterioration permit system in a region that has more land area designated as Class I than any other region.
- Helping secure needed sewerage improvements for the more than four dozen publicly owned systems discharging to marine waters, all of whom have announced their intention to apply for waivers from secondary treatment, once it's decided whether they qualify for the waiver.

Success in dealing with these problems will not come solely as the result of transactions between EPA and state and local pollution control agencies in Alaska and the Pacific Northwest. EPA approval of state and local plans and strategies to deal with all these problems will be the culmination of a process that involves the delicate accommodation of conflicting demands that, at the outset of the process, may have appeared to be irreconcilable.

The process—if it is to work best—must start with the willingness of persons with competing points of view to sit down together to find common ground on which fair and workable solutions can be reached. That's the way EPA's Region X is pledged to continue to work to make things happen in 1979.

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EPA is charged by Congress to protect the Nation's land, air and water systems. Under a mandate of national environmental laws focused on air and water quality, solid waste management and the control of toxic substances, pesticides, noise and radiation, the Agency strives to formulate and implement actions which lead to a compatible balance between human activities and the ability of natural systems to support and nurture life.

If you have suggestions, questions or requests for further information, they may be directed to your nearest EPA Regional public information office.

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