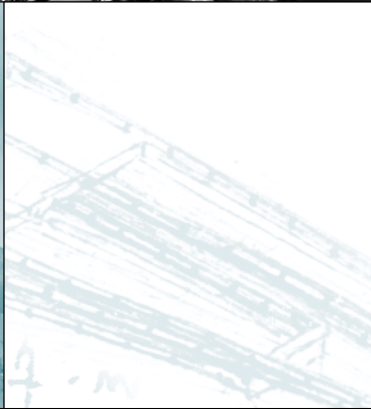
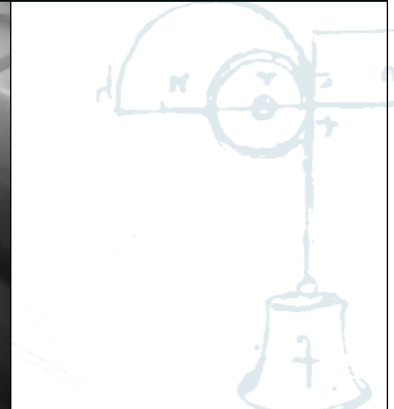




Innovations in Environmental Management

Industry



**Helping Companies Cut Costs and
Improve Performance**





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Innovations in Environmental Management

Helping Companies Cut Costs and Improve Performance

Innovations



Innovation—a new idea, method, or device. The will to innovate is strong within the private sector. It sparks creative thinking, influences management decisions, and ultimately leads to improvements that can boost efficiency and the quality of goods and services. But with responsibilities for protecting public health and the environment, innovation is important for the way the U.S. Environmental Protection Agency (EPA) does business, too.

In recent years, EPA has pursued promising innovations to strengthen protection capabilities. We've looked at traditional environmental programs and asked: How can they be improved? Can we get more protection more efficiently? As a result, major programs, like Superfund, are being reformed, and innovative approaches, like market-based trading, are creating more flexible, cost-effective alternatives for achieving environmental goals.

By focusing on results, we're finding new approaches for problems and improving upon the programs and policies that have brought the country so much environmental progress over the past 30 years. As we look to improve, we're also constantly reminded that change takes time. EPA is an agency involved in complex issues and our decisions and actions often have significant implications for many diverse interests. So changes—and results—may not always come as fast as we'd like. But as this

report shows, we can work through problems, improve upon the current system, and lay the groundwork for continued progress.

EPA is committed to creating a stronger, more cost-effective system of environmental protection for the 21st century, and we believe the ingenuity and creativity of the private sector can help us do so. But first we know we have to do a better job of explaining the changes taking place so companies begin to understand the improvements that have been made and how they can take advantage of them. We also want them to know that the door for new ideas is wide open at EPA. The following report was developed with that goal in mind. It provides an overview of how we're working to make environmental programs work better and cost less. We hope it will lead to more collaboration and more new ideas that are good for business, good for the environment, and good for the citizens that live and work in communities throughout the country.



Rewards

for Environmental Excellence

While environmental managers have spent much of the past 30 years focused on compliance, many now find themselves focused on a broader set of performance goals. They're interested in cutting waste, conserving materials, and improving efficiency—results that add business value, improve competitiveness, *and* help protect the environment.

EPA recognizes this trend and we're supporting it through voluntary programs that give companies tools, information and other resources to run their operations more efficiently. We're promoting use of environmental management systems (EMSs) that enable companies to track and manage their responsibilities more systematically. We're also looking at ways to reward environmental performance. That's something the current system rarely does now. Companies are expected to comply with regulations, and they're subject to enforcement action if they don't. But they're generally offered little or nothing if they

decide to do more. We see this as a missed opportunity for encouraging companies to improve.

To provide this encouragement and help spur more innovation, we're developing a new "Performance Track" that will distinguish between different levels of performance in a way that isn't done now. The goal is to reward and recognize top environmental performers and provide meaningful incentives that can motivate others to improve. As currently envisioned, we will offer a standard package of incentives, including public recognition, for facilities that meet certain criteria. These criteria are likely to include having a record of compliance, an EMS, measures for demonstrating environmental performance, and a system for reporting performance to the public. EPA would offer these incentives for a certain period of time, and in order to continue receiving them, facilities would have to periodically reaffirm that they are still meeting the program's performance criteria.

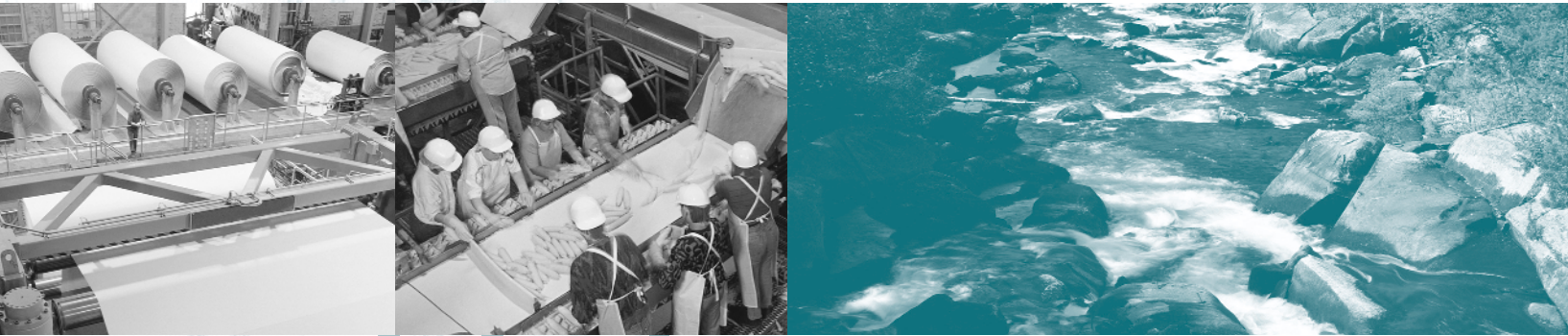
Once this track is up and running, we will develop additional incentives for the facilities that not only meet the above criteria, but that routinely do much more. This second track will reward significant environmental achievement among the very top performers. Because the group will be smaller, EPA anticipates being able to offer a higher level of public recognition, and tailored incentives that address their individual needs in a more specific and meaningful way.

EPA sees this program as a major step toward creating a more performance-based system for driving continuous environmental improvement. We will announce the features of the first track in spring 2000, and following public comment and consultation, expect a summer 2000 launch. We will begin working with others to design the second track—for the very top performers—immediately afterwards.

What It Takes To Be a Leader

Leadership can mean many different things to different people. As EPA develops the "Performance Track," we have to decide what actions merit distinction and what benefits participants should receive as a result. We'll draw upon what's been learned from pilot projects, such as the Environmental Leadership Program. This 1-year pilot project was launched in 1995 to investigate the qualities associated with environmental leadership. Participants were required to have a strong compliance history and a state-of-the-art EMS and to conduct environmental audits. Additionally, they were expected to involve their employees in environmental management, to share their environmental expertise with others, and to provide information about their performance to the community and general public. In return, the companies gained recognition from EPA that could be used in their marketing efforts. They were exempted from routine regulatory inspections, and they received a grace period to correct violations that didn't involve criminal action or endanger public health or the environment. The 12 companies participating also gained some intangible benefits. **Ocean State Power**, for example, expressed appreciation for the recognition provided by the program, noting they "gained increased public confidence in our community and in our region" as a result.





Help On Compliance

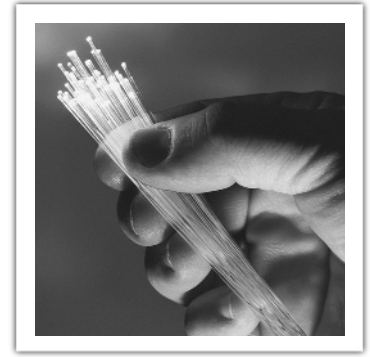
While compliance is a given for leading companies, it's still a major focus for the majority. So, we're looking for ways to help companies achieve compliance and stay there. One way we're doing this is through an audit policy that encourages companies to conduct their own environmental evaluations. The idea is to have companies find and fix problems on their own, rather than at the direction of a regulator. If they do, we'll waive or reduce the potential enforcement penalty as long as the company was not involved in criminal behavior.¹ During the past 4 years, 675 companies have come forward to disclose potential violations at more than 2,700 facilities. Many have already had penalties waived or reduced.

This approach gives companies a chance to come into compliance without the stigma of an enforcement action and many of the associated costs. The National Association of Manufacturers and the Corporate Environmental Enforcement

¹This policy applies to fines that would be assessed for failure to comply. It doesn't include the portion that is levied to recoup any competitive advantage a company might have gained while noncompliant.

Self-Policing Pays Off

Companies that take advantage of EPA's audit policy may find it pays off in a big way. That's been the case in the telecommunications industry. In 1997, **GTE** used this policy to resolve spill prevention and right-to-know violations at 314 facilities in 21 states. They paid a \$52,000 penalty, the amount they saved while noncompliant. But in light of their outstanding cooperation in resolving this matter, EPA waived nearly \$2.4 million in potential penalties. Last year, 17 more telecommunications companies followed their lead. Together, they found and promptly corrected more than 2,000 violations at more than 600 sites. They were fined approximately \$178,000 (the economic benefit they gained while noncompliant), but may see waivers totaling more than \$6 million.



Counsel have praised the audit policy, and four out of five companies responding to a survey said they would use it again.

Specialized compliance assistance centers are another way we're helping environmental managers meet their compliance responsibilities. EPA has developed partnerships with industry, environmental groups, universities and other government agencies to establish these new information resources for specific industries. The centers provide quick, easy access to a variety of environmental information, including federal regulations, compliance tools, training opportunities, and pollution prevention case studies. They're Internet-based, so information is available 24 hours a day. Several also offer toll-free hotline and

fax-on-demand services.

As the box on the following page shows, they're now accessible to environmental managers in several major business sectors as well as local governments.



Many organizations routinely interact with businesses on environmental and other management issues, providing loans, issuing business permits and providing other services. Given a choice, we know most companies would prefer to interact with more familiar organizations than with regulatory officials. So we're focusing on becoming a more effective "wholesaler" of compliance assistance information. This means providing information for these other organizations to actually deliver. As part of this strategy, we're also focusing on developing more regulatory checklists and other tools that can help environmental managers understand requirements well *before* they take effect. These are simple ideas, but they could go a long way in making compliance easier to manage.

Compliance Assistance Centers: Now Open on the Web

The following centers can be accessed through EPA's web site at <http://www.assistancecenters.net>
Or they can be accessed directly at the addresses noted below.

CCAR-Greenlink® (for Auto Service & Repair): www.ccar-greenlink.org

National Agriculture Compliance Assistance Center: www.epa.gov/oeca/ag

ChemAlliance (for Chemical Manufacturers): www.chemalliance.org

National Metal Finishing Resource Center: www.nmfrc.org

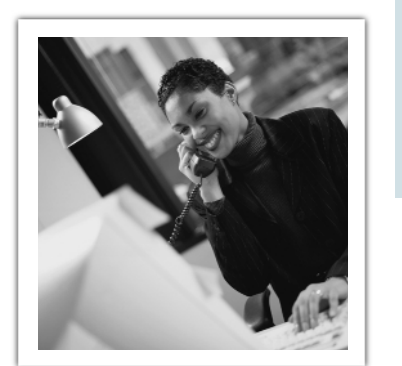
Printers' National Environmental Assistance Center: www.pneac.org

Printed Wiring Board Resource Center: www.pwbrc.org

Paints and Coatings Resource Center: www.paintcenter.org

Transportation Environmental Resource Center: www.transource.org

Local Government Environmental Assistance Network: www.lgean.org





Reductions in Paperwork

While providing assistance is an important part of assuring compliance, reducing unnecessary regulatory paperwork and red tape is important, too. The sheer volume and complexity of requirements can be overwhelming and a major obstacle to improving environmental performance. So in 1995 we did something we'd never done before—we conducted a line-by-line review of all our regulations.

That job wasn't simple, but it was overdue. In our efforts to keep up with the stream of legislation passed by Congress during the past three decades, we had never paused to review existing regulations. Once we did, we found provisions that were redundant or no longer necessary. As a result, the environmental section in the *Code of Federal Regulations* was cut by 1,500 pages. But we think it had another important effect: creating a greater awareness among EPA managers and staff about the need to streamline regulatory procedures. As several examples in this section show, we've cut paperwork and red tape in many environmental programs.

Over \$1.3 Billion Saved at Superfund Sites

Cleaning up hazardous waste sites can be a complex and expensive process. Early on, companies responsible for Superfund cleanups were frustrated by the slow pace and high costs. In recent years, EPA took on a number of far-reaching administrative reforms to turn this program around. We've addressed every aspect of Superfund: from assessing risk and assuring public involvement to conducting cleanup and taking enforcement action. As a result, cleanup is now faster, fairer and more efficient. On average, the time and costs associated with cleanup have fallen by 20 percent. More than three times as many cleanups have been completed in the last 6 years than in all previous years combined. Overall, since 1996, we estimate the cost-savings from more efficient cleanups to be more than \$1.3 billion.



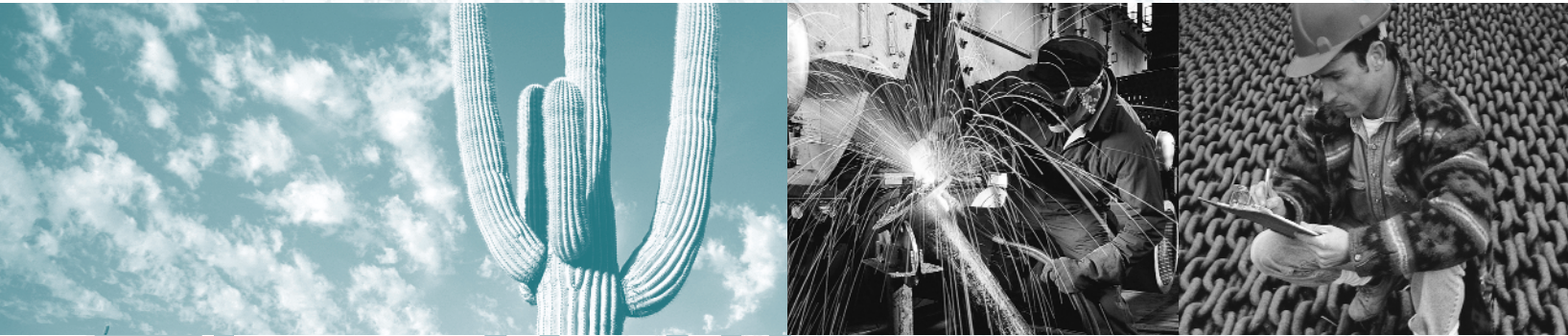
Less Cost and Paperwork for Auto Makers

Car manufacturers have seen the results of streamlining when they certify new models for compliance with air emissions requirements. The changes we've made are saving the industry \$55 million a year, while also providing Americans with cleaner air. Under the old requirements, a large-volume manufacturer would typically spend \$8.4 million and 120,000 hours filling out 13,000 pages of certification paperwork.

Testing was done before the cars were sold—an approach that didn't catch emissions problems once the cars hit the highway. Working with the industry, we developed a better process that targets vehicles in use. This approach improves the environment in two ways: by improving detection of actual performance problems once cars are in use and by providing performance data that can help manufacturers produce better emissions control equipment. More important from the automakers' point of view, applications are now half as long, saving the typical company 60,000 hours and \$4.2 million for each new model.

Faster, More Efficient Registrations for Pesticides

Pesticide companies produce a variety of products that benefit consumers. But before any new product is placed on the market, it has to be proven safe for use. Every year, companies send thousands of applications to EPA to register or change existing products. Today, that process is faster, easier, and just as protective. Products that pose very low risk due to their inherent low toxicity have been exempt from review. New options allow companies to proceed with certain registration steps, such as making minor labelling changes, as long as they notify EPA first. And management improvements have quickened the pace of regulatory reviews—as an example, the average time companies spend waiting for a decision on acute toxicity testing has fallen from 24 to 4 months.



Flexibility

for Better Results

Just like you, EPA wants to provide the very best products and services possible. So we're trying new approaches that can help companies cut costs and gain flexibility while achieving the same or even better results. These new approaches are important if we are to build on the progress of the past 30 years, and continue growing more proficient in achieving environmental goals.

A look at the priorities of the past three decades shows how far we've come. In the 1970s, the focus was almost entirely on pollution control, which generally meant installing "end-of-pipe" technology. During the 1980's, managers began striving to not only control pollution, but to prevent it before it was created. The 1990s have given rise to an even broader goal—sustainability—a concept that requires continuous environmental improvement and respect for economic and social well-being. It's what many in the private sector now refer to as the "triple bottom line," and it challenges EPA to create new approaches that address and support these interests.

One tool we're finding effective is market-based trading. In contrast to the more traditional approach of addressing pollution through technology-based standards, trading harnesses the power of the free market for environmental gain. It gives regulated parties the option to buy or sell environmental "credits," depending on their circumstances. If you can exceed the performance level required by law, then you have a commodity to sell in the marketplace. Conversely, if you can't meet environmental goals cost-effectively, you can comply by purchasing those excess credits in the marketplace. For almost a decade we've been using trading programs to help control air pollution from a variety of sources. Based on its proven effectiveness, it's now being used increasingly to solve other environmental problems, like water pollution and wetlands loss.

We're also trying new approaches to environmental permitting. Under the nation's environmental laws, companies typically need a variety of permits that specify how environmental responsibilities will be managed. The application process takes time, and any change in operation can prompt further regulatory review. As a result, companies can be delayed in making production changes needed to bring new products to market. Recognizing such problems, we're looking for ways to make permitting faster and more efficient without compromising the environmental and public health protection that permits provide.

Acid Rain Allowances on the Chicago Board of Trade

For real evidence of just how much environmental management has changed over time, look at the annual auction of acid rain allowances on the Chicago Board of Trade. For the past 5 years, this auction has been part of an EPA program to reduce acid rain by cutting sulfur dioxide (SO₂) emissions from power plants. The goal is to cut emissions by 50 percent by 2010. Through the auction, electric companies, brokers and private citizens can buy and sell SO₂ allowances. Each allowance gives a plant the right to emit one ton of SO₂, as long as it doesn't violate health standards for clean air. This year, all available allowances were sold for a total of more than \$53.5 million. Overall, the national cost of compliance is about half that initially estimated for conventional control methods when the goals were first set.

One new approach is permitting on a facilitywide basis. A facility usually has a permit for every smokestack and wastewater pipe on the premises. But a facilitywide permit consolidates multiple requirements into a single document. This approach eliminates the need for permit revisions and review as long as total emissions stay below the overall facility limit. The result for environmental managers is less paperwork and regulatory delay—an important consideration for companies in quick-to-market industries where timing can mean a big difference in market share. **Intel**, **Merck**, and **Anderson Windows** are among several companies working with EPA to test facilitywide permits. Company officials have estimated this approach could save them millions of dollars a year in lost production time. Along with cost savings and market advantages, companies may also benefit from new efficiency or pollution prevention improvements. These opportunities may become more visible once a comprehensive, facilitywide evaluation of permits is undertaken. So far, facilitywide permits are being developed for air quality requirements, but they may be used for other requirements in the future.





Partnering for Improvement

Why would an environmental manager do more than just what's required? Ask any one of the more than 7,000 organizations that have signed up for one of EPA's voluntary partnership programs. They might cite their desire to cut costs and become more competitive in today's global economy. They might point to the growing demand for environmental stewardship in doing business with others at home or abroad. They might describe their desire to be a good corporate neighbor in the areas where they operate or to assure a safe, clean workplace for their employees.

EPA partnership programs respond to these interests. They provide technical assistance to help companies make improvements, like cutting waste, conserving water and energy, and increasing efficiency. They are voluntary, and each is designed to address a specific problem, such as climate change, or a

Partners for the Environment: Helping Companies Boost their Bottom Line

Pick an industry and we can show you real world examples of companies cutting costs and increasing productivity as a result of participating in EPA's partnership programs. Here are just a few examples of how companies have benefitted:

- **Climate Wise:** In 1995 alone, **Dupont** saved more than \$31 million by improving industrial efficiency, mostly through actions requiring little or no capital expenditures.
- **Energy Star Buildings and Green Lights:** By switching to more efficient lighting at more than half its building space, **Boeing** reduced energy consumption by 200 million kilowatt hours a year, cutting the company's annual operating costs by \$12 million.
- **WasteWise:** **Eastman Kodak** found it could save \$250,000 a year by selling coated paper liners for reuse as label backings. Overall, the company is saving \$3 million annually as a result of improved waste management practices.



business sector, such as hotels, that may not be well suited to traditional regulatory approaches.

In all, EPA offers more than 20 distinct programs along with regional programs that address specific regional priorities. Together, these programs are referred to as our “Partners for the Environment,” and they’re making a big difference. Consider that, in 1998, participants conserved 1.8 billion gallons of clean water, eliminated 7.8 million tons of solid waste, and prevented

air pollution equivalent to taking 65 million cars off the road each year. They also saved an estimated \$3.3 billion!

Along with technical assistance and an opportunity to save money,

some participants also receive awards and other forms of public recognition for environmental achievement. The ENERGY STAR program, for example, gives companies the right to use a distinctive logo that can help consumers identify energy-efficient products. The program also presents awards. After introducing more than 450 energy-efficient PC models in 1999, **IBM** was named the ENERGY STAR Computers Partner of the Year—for the second year in a row! The company’s pride in this award is evident for it’s the first achievement mentioned in their latest annual environmental report.

As the box above shows, our partners produce a variety of products. Some decide to join one program while others join several. But, they all have one thing in common—they’re seeing firsthand that preventing pollution really does pay.



To Learn More

As this report shows, EPA is working to develop new strategies that can help companies cut costs and improve environmental performance. If you'd like to learn more about any of the initiatives described in this booklet or about how you might work with the agency, contact EPA's Office of Policy, Economics and Innovation at (202) 564-4332. You also can look for information on the Internet at www.epa.gov/reinvent/oprindex.htm or call one of the individual programs listed below.

EPA Contacts

Audit Policy

Office of Regulatory Enforcement
(202) 564-2220

Automobile Emissions Certification

Office of Air Quality Planning and Standards
(919) 541-5615

Compliance Assistance Centers

Office of Compliance
(202) 564-5082

Emissions Trading

Office of Air Quality Planning and Standards
(919) 541-5616

Performance Track

Office of Policy, Economics, and Innovation
(202) 564-4332

Permitting

Office of Policy, Economics, and Innovation
(202) 564-4332

Pesticides Registration

Office of Pesticide Programs
(703) 305-5447

Superfund Reform

Office of Emergency and Remedial Response
(703) 603-8960

Partners for the Environment

Office of Policy, Economics, and Innovation
(202) 564-4332



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