United States
Environmental Protection
Agency

Office of
The Administrator
(1803)

EPA 100-B-97-003
Spring 1998

EPA

PARTNERS FOR THE ENVIRONMENT

A Catalogue Of The Agency's Partnership Programs

Partnership in Prevention
Government-Industry-Community

&EPA WASTE WISE
Preserving Resources, Preventing Waste

EPA Green Lights PARTNER

CLIMATE WISE

energy
Saving The Earth, Saving Your Money

Project XL
www.epa.gov/ProjectXL

&EPA WAVE
Water Alliances For Voluntary Efficiency

CONTENTS

DEDICATION

This publication is dedicated to the memory of Joel Kurihara (1962-1995), formerly of the Global Environmental Management Initiative (GEMI), who believed in the voluntary partnership approach and provided guidance and spirit to the Agency's partnership programs. This document is patterned after a GEMI document authored by Mr. Kurihara entitled *GEMI reference to EPA Voluntary Programs*.

A. INTRODUCTION

Over the last several years, an important change has been taking place in our national strategy for protecting the environment. Through an array of partnership programs that we collectively refer to as *Partners for the Environment,* EPA is demonstrating that voluntary goals and commitments achieve real environmental results in a timely and cost-effective way. These efforts complement traditional approaches to environmental protection and build cooperative partnerships with a variety of groups, including small and large businesses, citizens groups, state and local governments, universities and trade associations.

The results of the Partners for the Environment efforts are impressive. At the end of 1996, the programs counted 6,882 organizations participating in one or more partnership efforts. Working cooperatively with EPA, these partners have set goals such as conserving water and energy, reducing greenhouse gases, toxic emissions, solid wastes, indoor air pollution and pesticide risk. Together these partners have:

- reduced 5.2 million tons of solid waste annually;
- saved 199 trillion BTU's of energy;
- prevented 24.7 million metric tons of greenhouse gas emissions;
- reduced more than 750 million pounds of toxic emissions; and
- conserved more than 1.2 billion gallons of water.

EPA is also working with industry and others to effect long-term institutional changes, such as incorporating environmental costs into business decision making, incorporating environmental impacts into product design, minimizing persistent bioaccumulating chemicals in waste, reducing pesticide risk, and encouraging environmental leaders to work with smaller companies through mentoring programs. In addition, EPA is working to improve its regulatory framework by identifying cleaner, cheaper, and smarter ways of protecting the environment, with the possibility of some regulatory flexibility in exchange for better environmental results than the law currently allows.

The voluntary partnerships fostered by these programs are not just for the good of the environment; they make good business sense and prove that pollution prevention pays. Together these partners have saved $852 million in 1996; and expect to save $4.6 billion annually by the year 2000.

To further these partnership efforts, EPA's new Office of Reinvention will guide and coordinate the efforts of all Agency partnership programs. In addition, EPA will continue to work with the Vice President's National Partnership for Reinventing Government to promote and expand voluntary partnership efforts. EPA views these partnership efforts as key to the future of environmental protection, and expects that continued participation with result in significant reductions in pollution generation and economic savings for industry and government in the future.

This Catalogue is produced by the Agency's Partnership Programs Coordinating Committee. It has been expanded since its first publication in Spring 1996 to include voluntary partnership efforts taking place in both EPA regional and headquarters programs. We hope you find this document useful and would like to hear any comments you have about it or partnership programs in general. You may direct any comments and questions to:

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Questions about specific programs may be directed to the program managers listed in this document. Also, be sure to visit the Partners for the Environment Web Site at http://www.epa.gov/partners.

B. ABBREVIATIONS USED IN THIS DOCUMENT

APPD	Atmospheric and Pollution Prevention Division
BMP	Best Management Practices
Bcf	Billion Cubic Feet
BPPD	Biopesticides and Pollution Prevention Division
CAA	Clean Air Act
CCAP	Climate Change Action Plan
CSI	Common Sense Initiative
DOE	Department of Energy
Dfe	Design for the Environment
EMS	Environmental Management System
EPACT	Environmental Policy Act
ESAP	Environmental Self-Assessment Program
FDA	Food and Drug Administration
GAO	General Accounting Office
GEMI	Global Environmental Management Initiative
IAQ	Indoor Air Quality
IPM	Integrated Pest Management
ICC	International Chamber of Commerce
IRR	Internal Rate of Return
LMOP	Landfill Methane Outreach Program
MOU	Memorandum of Understanding
MMT	Million Metric Tons
MEC	Model Energy Code
OPP	Office of Pesticides Programs
OPPE	Office of Policy, Planning and Evaluation
PESP	Pesticide Environmental Stewardship Program
SBA	Small Business Administration
TQM	Total Quality Management
TSCA	Toxics Substances Control Act
USDA	U.S. Department of Agriculture
WAVE	Water Alliances for Voluntary Efficiency

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D. EPA VOLUNTARY INITIATIVES
1. 33/50 PROGRAM

HISTORY

The 33/50 program was established in 1991 — the first major EPA voluntary initiative for reducing pollution. 33/50 identified 17 high-priority toxic chemicals, and targeted these for ambitious reductions in all overall amounts of discharged to the environment, or sent to waste treatment facilities. The hallmark of the 33/50 Program is *flexibility.* EPA challenged corporate America to reduce toxic emissions through whatever methods were appropriate, but to consider and adopt source reduction whenever possible.

American industry rose to the challenge and responded resoundingly to EPA's challenge. 1,300 companies voluntarily joined the 33/50 Program by submitting individual commitments to reduce toxic release — most of the commitments contain explicit numerical goals and timetables for achieving reductions. Taken together, the 33/50 letters became voluntary pledges to reduce pollution across the nation. These were no ordinary letters. They were the sole requirements for participating in the 33/50 Program. No new paperwork — just partnerships between government and industry.

True to its word, the 33/50 Program folded its tents once the 1995 data revealed the Program's final accomplishments — a rare example of a government program that does not live on indefinitely, even after its mission is achieved. The accomplishments of the 33/50 Program have been recognized by receipt of the two prestigious national awards. In 1995, 33/50 received a *Hammer Award* for reinventing government from Vice President Gore's National Performance Review. In 1997, the program was honored to be recognized as one of the 25 best government innovations in the country by the *Innovations in American Government Award Program* sponsored by the Ford Foundation and the John F. Kennedy School of Government at Harvard University.

GOALS

The 33/50 Program set national priorities for preventing chemical releases to the environment by targeting 1.5 billion pounds of 17 high-priority pollutants reported to TRI in 1988 for reduction by 33% in 1992 and 50% in 1995. The 33/50 target chemicals were selected on the basis of toxicity concerns, high volumes of industrial use and potential for reduction through pollution prevention.

Benezene	Cadmium & compounds	Carbon tetrachloride
Chloroform	Chromium and compounds	Cyanide compounds
Dichloromethane	Lead & compounds	Mercury & compounds
Methyl ethyl ketone	Methyl isobutyl ketone	Nickel & compounds
Tetrachloroethylene	Toluene	1,1,1-Trichloroethane
trichloroethylene		

COMPANY PARTICIPATION

Corporate America's commitment to a cleaner environment in a healthy economy was 1,300 companies strong in the 33/50 Program. These companies include many of the most recognizable corporate names in the world, as well as hundreds of mid-size and smaller companies that are not often in the glare of the public

spotlight. These companies volunteered to take on the huge national challenge of cutting pollution in half in a remarkably short time frame. The buy-in and motivation was light years ahead of traditional command-and-control responses to environmental regulation.

BENEFITS OF PARTICIPATION

In return for 33/50 commitment letters, EPA acknowledged each company with a certificate of appreciation for voluntary participation, signed by the EPA Administrator. Upon achievement of the 33/50 national goal of a 50% reduction, companies also received a congratulatory certificate signed by Vice President Gore. The value of the companies of this positive feedback was immeasurable, and has been instrumental in helping change the nature of the relationship between government and industry from confrontation to one of partnering for environmental problem-solving.

The 33/50 Program has also highlighted the progress made by individual companies through a series of about 40 detailed *Case Studies* and 150 briefer *33/50 Success Stories*. The Success Stories are available on the Internet at: **www.epa.gov/opptintr/33/50/.**

RESULTS

More than 750 million pounds of toxic waste has been eliminated under the umbrella of 33/50 -- waste that is not longer burned, buried, flushed or transported to treatment, disposal of recovery plants each year. 33/50 actually hit both its goals -- a 33% reduction by 1992, and a 50% reduction by 1995 -- a year ahead of schedule. According to the 1995 TRI Reports, the 33/50 Program's overall reduction was 55%. In general, 33/50 companies are reducing their emissions at much faster rates than other companies, and with a much greater reliance on source reduction as a key method for achieving their results.

2. AgSTAR

HISTORY

AgSTAR is the voluntary EPA, U.S. Department of Agriculture (USDA), and DOE sponsored program that promotes cost-effective methods for reducing methane emissions through manure management. The program was originally launched during the summer of 1993, under the U.S. CCAP. AgSTAR is designed to remove barriers that impede the widespread adoption of technologies that capture and utilize the energy value in agricultural methane. The main focus of the program is on the swine and dairy industries.

Methane is produced as manure decomposes anaerobically. Large quantities of methane are produced by liquid and slurry storage systems that are typically used in modern, larger swine and dairy farms. Manure management systems produce about 10% of total U.S. anthropogenic methane emissions. Methane emissions are of concern because methane is a potent greenhouse gas, about 21 times more effective at trapping infrared radiation than an equal quantity of carbon dioxide (mass basis) over a one hundred year time horizon. By recovering methane from the manure produced by the nation's largest swine and dairy operation, emissions can be substantially reduced while the energy value, which would otherwise be lost, is captured. Methane recovery systems also reduce odors and contribute to better water quality from more controlled manure management methods. EPA estimates that there are at least 3000 U.S. farms that could profitably reduce methane emissions by participating in the AgSTAR program.

GOAL

AgSTAR's goal is to reduce U.S. methane emissions by 2.25 million metric tons of carbon equivalent by the year 2000. To achieve this goal, it will be necessary for 2000 farms to install manure methane recovery systems (approximately 20 percent of the swine industry and 15 percent of the dairy industry).

PARTICIPATION

In order to realize the full energy, cost savings and environmental potential that exists, AgSTAR has organized the program into two major components: the industry Ally Program and the Partner Program. Currently, AgSTAR has 60 industry Allies that have agreed to promote cost-effective methods for reducing methane emissions and assist in assessing the supply and demand for methane recovery products. Some of these products include items such as electrical interfacing equipment engine generators, lagoon covers, and other equipment resources. Services such as digester design, construction services and turn key system development are also provided by AgSTAR Allies. AgSTAR also has 50 Partners representing over 400 livestock facilities. These Partners have agreed to survey their facilities and install methane recovery systems where it is financially and environmentally desirable. Four non-profit organizations have joined the AgSTAR Program as Endorsers and are assisting in promoting the program and its benefits including some state regulatory agencies.

BENEFITS OF PARTICIPATION

Livestock producers derive three main types of benefits from participation in AgSTAR -environmental, business and public relations. The environment is cleaner because greenhouse gas emissions are reduced, odors are reduced an additional steps is taken toward protecting water quality. The business of farming becomes more efficient by allowing the farmer to capture more value from livestock feed by converting the remaining organic component of the manure into methane, which results in energy savings when used. Finally, there are public relations benefits. All AgSTAR participants, including Utility Allies, Industry Allies and Partner farms, receive public recognition from the program for their environmental stewardship. ***For more information, contact: Kurt Roos at (202) 564-9041.***

3. CLIMATE WISE RECOGNITION PROGRAM

HISTORY

In 1993, EPA and the Department of Energy (DOE) formed a unique partnership that led the following year to the launching of Climate Wise — a voluntary program that encourages industry to adopt flexible, comprehensive approaches to reducing greenhouse gas emissions. Climate Wise is a key part of the nation's Climate Change Action Plan and reinforces and supports provisions of the 1993 Energy Policy Act.

On April 21, 1994, Climate Wise launched the White House Conference on Climate Action. With 248 current partners, Climate Wise companies already represent 7% of the U.S. industry energy use. Through Climate Wise, participants develop a comprehensive portfolio of emissions reduction actions that protect the environment, save money, and improve productivity. The program provides technical assistance and puts companies in touch with financial services to "jump start" energy efficiency and pollution prevention actions.

GOALS

Climate Wise helps companies turn energy efficiency and pollution prevention into a corporate asset. The program has three goals:

- Encourage the immediate reduction of energy use and greenhouse gas emissions in the industrial sector through cost-effective, flexible actions
- Change the way companies view and manage for environmental performance by demonstrating the economic and productivity gains associated with "lean and clean" management
- Foster innovative by allowing participants to identify the actions that make the most sense for their organization.

PARTICIPATION

Partners sign on by completing a Climate Wise Partnership Agreement, that a simple one-page form asks companies to:

- Designate a Climate Wise contact and program manager
- Establish a process for identifying and implementing cost-effective energy efficiency and pollution prevention actions
- Submit a Climate Wise Action Plan within 6 months of joining
- Report on the progress of their actions within 18 months of joining through the Department of Energy's Voluntary Greenhouse Gas Reporting System.

The Climate Wise Action Plan is a corporate Strategy for achieving environmental and economic results. Partners has an opportunity each year to update or revise their plan to replace and revise individual actions while maintaining or exceeding the original emissions reduction targets.

BENEFITS OF PARTICIPATION

Climate Wise companies save money, receive technical assistance and support for identifying financing options, meet and work with other leading industries and select service providers, and receive public recognition that demonstrates environmental leadership and performance.

Save Money — By the year 2000, Climate Wise companies expect to save more than $80 million annually through their efficiency measures. At a facility level, savings of $400,000 to $500,000 annually are being realized now. Much of the savings is being achieved through process and maintenance projects that require little or no capital investment. Other companies are investing in the future with dramatic plans for using alternative and renewable fuels, cogeneration, and employee and vehicle trip reduction programs.

Get Technical Assistance — Climate Wise connects partners with some of the best minds and resources in the country. They include national laboratories, university centers, utilities, trade associations, and state and local government pollution prevention, energy, and economic development offices. For example, twelve Climate Wise companies in Colorado have received assessments from the Industrial Assessment Center at Colorado State University. Assistance may tracking and calculating energy use and emissions reductions. The Climate Wise Opportunities Assessment Guide and Climate Wise Case Studies steer partners toward productive and profitable efficiency improvements. Partners are also encouraged to join other EPA and DOE voluntary programs that can assist them.

Exchange Information and Industry Leaders — Partners participate in and co-sponsor business to business exchange workshops to learn how other leading companies have improved profitability, productivity, and environmental performance. These events are designed to launch ongoing regional meetings that bring Climate Wise partners together with local utilities, peer companies, or supplier companies. These sessions provide an ongoing support system for project implementation.

Company driven working groups are currently meeting in several localities including: the Mid- Atlantic states: Austin, Texas; Northern California; Dade County, Florida; and around several industry sectors including: cement, textiles, vineries, and semiconductors/electronics.

Learn About Financial Assistance — Climate Wise puts partners in touch with financial assistance providers that can help make a corporate strategy a reality. Sources include loan guarantees from the Small Business Administrator (SBA), low-interest buy-downs form State providers, utility programs, and private sector financiers. The Nebraska Dollar and Energy Saving Loan Program, which is available to all Nebraska State Climate Wise Partners, is providing low interest loans of up to $250,000 to eligible Climate Wise partners. To date, seven partners have made use of the Loan Program for a total of $532,000 in improvements.

Get Public Recognition — Climate Wise recognizes companies for commitments and results through national and local Partnership Agreement signing ceremonies, award programs, public service advertising, support for participant sponsored media events and showcase demonstrations. In many cases mayors and governors have been personally involved in recognizing company achievements, Climate Wise has also placed articles highlighting company achievements in various magazines, trade journals and newspapers.

Climate Wise Contacts: *For more information, contact Pam Herman-Milmoe at 202/260-4407 or 202/260-0512 (fax); E-mail: herman-milmoe.Pam@epamail.epa.gov.* ***Wiseline:*** *1-800-459- wise or at our website: http://www/epa.gov.\climatewise.*

4. COALBED METHANE OUTREACH PROGRAM

HISTORY

The Coalbed Methane Outreach Program launched in spring 1994 to identify and remove obstacles to increased investment in coalbed methane recovery projects. The program raises awareness of opportunities for profitable investment. As a result, coal mines are discovering that methane recovery improves the safety and productivity of mining operations and enables them to profit from methane that was once simply a high-cost mine safety hazard. Local communities and other industries are recognizing that coalbed methane development creates jobs and revenues for the local economy.

Emission associated with coal mining operations account for approximately 11 percent of anthropogenic methane emissions in the U.S. Methane is a potent greenhouse gas; each pound of methane emitted from coal mining is about 21 times more effective at trapping radiation in the atmosphere than a pound of carbon dioxide.

GOAL

The Coalbed Methane Program's goal is to identify barriers and remove obstacles to profitable methane recovery coal mines through dissemination of unbiased technical and economic information.

PARTICIPATION

Through the Coalbed Methane Outreach Program, EPA works with industry, states, and other agencies to encourage profitable methane recovery. The Program does not include formal partners that sign agreements with EPA. Instead, the Program achieve its objectives by providing critical targeted information and connecting project partners. Assistance to mines is site specific and is designed to meet the needs of the individual company. Currently, there are 15 active coal mines selling or using recovered gas.

BENEFITS OF PARTICIPATION

The Program does not include formal partners that sign agreements with the EPA. However, EPA provides states, industry, other agencies, and the public with information on profitable coalbed methane and recovery opportunities, project feasibility studies, guides for state, federal and private finance sources, and evaluations of alternative local uses for recovered coal mine methane. ***For more information, contact Karl Schulz at (202) 564-9168***

5. COMMON SENSE INITIATIVE

HISTORY

The Common Sense Initiative (CSI) is a fundamentally different vision of environmental policy. Through this initiative, EPA has convened representatives from federal, state, and local governments, community-based and national environmental groups, environmental justice groups, labor, and industry to examine the full range of environmental requirements impacting six industry sectors:

- **Automobile Manufacturing**
- **Computers and Electronics**
- **Iron and Steel**
- **Metal Finishing**
- **Petroleum Refining, and Printing.**

These six sectors are looking for opportunities to change complicated and inconsistent environmental regulations into comprehensive strategies for environmental and public health protection that all can agree to, with an emphasis on pollution prevention, instead of end-of-pipe solutions. The Common Sense Initiative reflects the EPA's commitment to setting strong environmental standards, while encourage common sense, innovations, and flexibility in how they are met.

GOAL

Cleaner, Cheaper, Smarter environmental management solutions.

PARTICIPATION

The six industry sectors have more than forty (40) exciting projects underway, including:

- **Automobile Manufacturing Sector** — A Life Cycle management process for examining very step of a product's production, starting from the design and collection of raw materials required for manufacturing and carrying through to the product's disposal at the end of its useful life. This project focuses on a car's instrument panel, exploring ways to help manufacturers and suppliers build environmental factors into their partnering arrangements.

- **Computers and Electronics Sector** — In this rapidly changing technology, disposal of computers and other electronic equipment has created a new and growing waste stream, or "end-of-life" equipment. This sector has a project designed to help more clearly identify the composition of this electronic waste stream and to help determine the economic viability of residential collection programs and other methods for dealing with this emerging issue.

- **Iron and Steel Sector** — Brownfields are abandoned or idle industrial sites. Redevelopment of these sites can mean jobs and a healthier economy for communities around the sites, as well as prevention of development of "greenfields, " previously undeveloped property. Two pilots in Northwest Indiana

and Birmingham, Alabama are underway to test guiding principles developed by the sector for dealing with iron and steel Brownfields.

- **Metal Finishing Sector** — This sector has developed a set of ambitious voluntary performance goals to promote pollution prevention and environmental management for the industry. The goals address resource utilization, hazardous emissions, and economic paybacks/compliance costs.

- **Petroleum Refining Sector** — This sector has developed a project to more efficiently reduce the loss of process fluids/vapors that occur through equipment leaks. Three potential alternatives are being pursued to increase regulatory flexibility and cost effectiveness and reduce emissions through a voluntary "Opt- in" implementation approach.

- **Printing Sector** — The New York Education project is targeting fundamental change to incorporate pollution prevention into everyday work practices of small printers.

CSI encourages the development and creation of innovative solutions to today's environmental problems. Through the use of environmental technologies and processes unique to individual industries, industries can achieve the same or better environmental protection, and some cases, achieve cost savings at the same time. CSI focuses on flexibility and incentives for facilities to use their own ingenuity to meet or exceed environmental protection standards in a way that is best for their business.

CSI Contacts

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6. THE DESIGN FOR THE ENVIRONMENT (DfE) PROGRAM

HISTORY

Through the Design for the Environment (DfE) Program, EPA develops and provides businesses with information to make environmentally informed choices and design for the environment. DfE forms voluntary partnerships with industry, public interest groups, universities, research institutions, labor groups and other government agencies to evaluate environmentally friendly alternatives to existing product processes or technologies. Across the wide variety of DfE projects, **DfE strives to promote the incorporation of environmental considerations into the traditional business decision parameters of cost and performance.**

GOALS

Unlike sign-up programs that join with individual businesses, the DfE program partners with an entire industry sector through industry leaders and trade association representatives. The resources and talents of an entire industry are joined with EPA environmental expertise and brought to bear on a specific issue within that industry evaluating alternatives in terms of performance, cost and human health and environmental risk. The results of these evaluations are disseminated throughout the industry so business decision-makers can make better informed decisions that result in reduced risks and environmental burdens while improving efficiency and the bottom-line. The broad goals of the DfE program are:

- To form voluntary partnerships with a variety of stakeholders focusing on the needs of small to medium-sized businesses in a particular industry sector;
- To develop specific, comparative analysis of substitute processes or technologies;
- To disseminate real-world, practical pollution prevention and risk reduction information; and
- To promote the incorporation of environmental considerations into business decision making.

PARTICIPATION

The wide variety of DfE Projects are loosely organized into several categories: Cooperative Industry Projects that work with businesses and trade associations on specific issues; the Green Chemistry Program that promotes the development of products and processes that reduce or eliminate the use of generation of toxic substances; Institutional Projects aimed at changing aspects of business practices and removing barriers to P2 and environmental risk reduction; and Cooperative Government Projects and promote the incorporation of environmental concerns into government procurement.

A. Cooperative Industry Projects

- **DfE Printing Projects:** The DfE Printing Projects are cooperative EPA-industry partnerships aimed at developing specific pollution prevention (P2) information for small and medium sized printers. Partnerships have been forged with three sectors of the printing industry: screen printing, lithography and flexography. Industry representatives have prioritized areas of environmental concern within each sector and comparative assessments called Cleaner Technology Substitutes Assessments (CTSAs) are completed

or are being conducted. Committees made up of both EPA and industry representatives evaluate the performance, cost and human health and environmental risks among substitute technologies specific to each printing sector. The Screen Printing Project evaluated 18 screen reclamation technologies, the Lithography Project assessed 37 blanket wash formulations, and the Flexography Project is comparing solvent, water and UV ink technologies. The partnerships also develop numerous outreach tools and materials to get the data into the hands of printers in a user-friendly format. Outreach methods have included case studies, bulletins, videos, software and satellite telecasts. A fourth partnership is being explored with the gravure printing industry. With the formation collected through these projects, printers will be able to implement pollution prevention risk reduction and evaluate environmental concerns along side performance and cost when making business decisions. ***For more information, contact Karen Seeh at 202-260-1714.***

- ***DfE Electronics Projects:*** The printed wiring board (PWB) manufacturing process requires substantial amounts of water, energy, and some toxic chemicals that pose potential environmental and health risks. To address these issues, the cooperative DfE PWB Project was formed to develop the information needed by PWB manufacturers to evaluate and implement cleaner technologies for manufacturing PWBs. Specifically, the project has developed a CTSA for the "making holes conducive" step of PWB manufacturing, which included conducting a performance demonstration of the baseline and alternative technologies that can perform this step. The Project also developed outreach strategies and information products to communicate project results to the PWB industry. The DfE PWB Project has now begun a second project to evaluate the risk, performance, and cost of several lead- free surface finish alternatives to the standard hot air solder leveling process.

  The DfE Program has also started a partnership project with the electronics industry and other stakeholders in which it will use both Life-Cycle Assessment and CTSA methodologies to evaluate and compare the environmental impacts, performance, and cost of cathode ray tube (CRT) and flat panel display (FPD) technologies that can be used in the desktop computer market. At present, computer displays using CRTs dominate worldwide markets. FPDs have market segments and this trend is expected to continue. The life-cycle environmental impacts and CRTs have not been verified or scientifically established to date. The project will provide industry with information on the environmental aspects of the technologies, materials, and processes involved in CRT manufacture and use, and on environmental challenges that should be addressed in the future. ***For more information, contact Kathy Hart at 202/260-1707.***

- ***Garment and Textile Care Program:*** For the past five years, EPA has been working in partnership with the dry cleaning industry, and other key stakeholders to reduce exposure to perchloroethylene or "perc." Perc, a chemical solvent used by most dry cleaners, poses health and environmental concerns. EPA is currently expanding the DfE Dry Cleaning Project, which historically focused primarily on dry cleaning, into a

broader DfE Dry Cleaning and Textile Care Program (GTCP). The goal of the DfE GTCP is to explore and promote through collaborative partnerships involving industrial supply chain participants and other stakeholders. EPA and GTCP stakeholders are developing a long-term strategy to examine alternative technologies for garment and textile care, textile and clothes design and manufacture, garment construction, care labels, outreach and education. Current activities focus on the completion of the CTSA for Fabricare and on a series of stakeholder strategy-development workshops and data collection activities culminating in a Garment and Textile Care Conference to be held in the Spring 1998. ***For more information, contact Cindy Stroup at 202/260-3889.***

- ***Industrial/Institutional Laundry Initiative:*** The goal of this project is to encourage formulators and users of laundry products and technologies to design and adopt safer and more efficient cleaning systems. DfE is entering into partnerships to recognize their innovations that reduce potential impacts to human health and the environment. Proposed partnerships are evaluated on the following considerations: use of ingredients that pose less concern to the environment or human health; ability to aid compliance with existing regulatory requirements; potential to achieve other environmental benefits such as reduced resource consumption; nature of a company's willingness to furnish measures of success. Benefits to companies joining the partnership include technical information and advice on the environmental aspects of formulations and public acknowledgment and recognition of product and process improvements. ***For more information, contact David Difiore at 202/260-3374.***

- ***Auto-refinishing Project:*** The DfE Program is establishing a project to reduce exposures to auto-refinish workers during spray painting operations in the 64,000 auto-refinishing shops in the U.S. In conjunction with state and local stakeholders, the project will work with a number of small shops to identify areas of improvement and incentives for encouraging environmental changes. ***For more information, contact Mary Cushmac at 202/260-4443.***

- ***Supplier Initiative:*** Manufacturers of complex products such as automobiles, appliances, ships and aircraft depend of a broad network of suppliers for parts and assemblies. Many of the suppliers in these supply chains (or tiers), are small and medium size businesses specializing in manufacturing operations. The DfE Program is exploring how to utilize these networks to promote the reduction of exposures and risks in these small facilities. Case studies are being developed in partnership with these companies to highlight and share risk reduction methods currently in use. ***For more information, contact John Sparks at 202/260-1682.***

B. Green Chemistry Program

- In 1992, OPPT launched a model research grants program call "Alternative Synthetic Pathways for Pollution Prevention". Since that time the Green Chemistry Program has built collaborations with other federal agencies, industry, and academia to promote the use of chemistry for pollution prevention through completely voluntary

partnerships to promote the development of products and processes that reduce or eliminate the use or generation of toxic substances associated with the design, manufacture, and use of chemicals. The Green Chemistry Program was established to recognize and promote fundamental and innovative chemical technologies that accomplish pollution prevention in a cost effective manner. *(See longer description of this program in Section 13).* ***For more information, contact Tracy Williamson at 202/260-3960.***

C. Institutional Projects

- ***Community College Partnership***: DfE has joined forces with the Partnership for the Environmental Technology Education (PETE) to form the DfE-PETE Alliance. PETE is a nonprofit organization established to promote environmental technology education through curriculum development and professional development training for environmental educators. The DfE-PETE Alliance is incorporating risk reduction and P2 information into the curricula of community and technical colleges nationwide.

  In the first year of implementation, new curricula have been developed for instructors in topics such as a 3-credit course on pollution prevention and curriculum modules for finding P2 resources on the Intent. In one effort, chemistry instructors learned instructional techniques using and small scale or micro-scale chemistry. These techniques are already being applied in classrooms, resulting in an immediate reduction in the generation of hazardous wastes from high school and college chemistry laboratories. The DfE-PETE Alliances will continue these successful initiatives and begin focusing on ways to reduce risks and prevent pollution prevention through process and product evaluation and substitution. ***For more information, contact Carol Hetfield at 202/260-1745***.

- ***Environmental Accounting***: More accounting systems treat part or all of a business's environmental costs as overhead costs, separating them from the products and processes product or process, and fails to provide sufficient information for managers to make an informed and optimal decision. Without the pertinent cost information, managers do not see the advantages of investments that prevent pollution and minimize environmental costs. EPA's Environmental Accounting Project seeks to encourage and motivate industry to understand the full spectrum of their environmental costs and incorporate these costs into decision making. *(See longer description of this project under Section 11).*

D. Cooperative Government Projects

- ***GSA Products Project***: This joint pilot project between EPA and the General Services Administration (GSA) was initiated in 1993 to help implement the environmentally preferable purchasing (EPP) section of President Clinton's Executive Order 12873: "Federal Acquisition, Recycling and Waste Prevention." The project is providing federal purchasers with information on certain environmental attributes for select

products, beginning with cleaning products. Federal purchasers can thus purchase cleaning products that are environmentally preferable for their specific circumstances. (Please note that this is not a list of environmentally preferable products). EPA has assisted GSAs Federal Supply Service in developing a solicitation for voluntary supplemental information to add to GSA's multiple award Schedule Contract for Biodegradable Cleaners/Degreasers. This information has been provided by many of the Schedule's vendors and is presented in the GSA 1996 Commercial Cleaning Supplies brochure, and in the 1997, Cleaning Products Catalog. EPA and GSA have also begun a similar effort to obtain supplemental environmental attribute information latex wall paints that are sold by GSA. Publication of this information in a GSA catalog is planned for the summer of 1998. ***For more information, contact Conrad Flessner at 202/260-3918.***

- ***EPA New Headquarters:*** GSA oversees the construction and renovation of many Federal properties, including the new EPA headquarters now being completed in Washington, D.C. EPA is working with GSA to incorporate environmental considerations into the selection of building materials and methods, and off-the- shelf items such as furniture. A case-study capturing the results of this partnership has been developed to share the "lessons learned" with the GSA and other Federal agencies engaged in construction/renovation activities. ***For more information, contact Conrad Flessner at 202/260-3918.***

7. THE ENERGY STAR® BUILDINGS AND GREEN LIGHTS® PARTNERSHIP

HISTORY

In 1991, APPD introduced Green Lights , a program designed for businesses and organizations to proactively combat pollution by installing energy-efficient lighting technologies in their commercial and industrial buildings. In April 1995, the Green Lights Program into ENERGY STAR Buildings — a strategy that maximizes whole-building energy efficiency opportunities. Through an Ally component, EPA also works with energy service providers, manufacturers, and distributors, as well as with business and trade associations to work together to promote the ENERGY STAR Buildings and Green Lights strategy. Participation has grown from 39 Green Lights Charter members in 1991 to more than 2,500 in 1997. The diverse group of participants includes corporations, small businesses, universities, health care facilities, nonprofit organizations, school districts, and federal and local governments.

GOAL

The goal of the ENERGY STAR Buildings and Green Lights partnership is to optimize energy efficiency and profits while preventing pollution. The energy to run commercial and industrial buildings in the United States produces 19 percent of U.S. carbon dioxide emissions and costs $110 billion a year. If implemented in every U.S. commercial and industrial building, ENERGY STAR Buildings' upgrade approach could present up to 35% of the carbon dioxide emissions associated with these buildings and cut the nation's energy bill by up $33 billion annually.

PARTICIPATION

As of January 1, 1998, 7.5 billion square feet (or approximately 10 percent of the nation's commercial and industrial space) participate in the ENERGY STAR Buildings and Green Lights Partnership. By joining, participants agree to upgrade 50% of their owned facilities with energy- efficient technologies, where profitable, over a seven-year period. ENERGY STAR Buildings participants first reduce their energy loads with energy-efficient lighting upgrades and building tune-ups, then focus on "right-sizing" their heating and cooling equipment to match their new energy needs. This comprehensive strategy takes advantage of system interactions and enables building owners to maximize energy savings and pollution prevention while lowering capital expenditures. EPA asks participants to complete facility upgrades only where they will result in a 20 percent internal rate of return and ensure occupant comfort.

BENEFITS OF PARTICIPATION

Benefits of participation in the ENERGY STAR Buildings and Green Lights Partnership are numerous including increased profits resulting from energy savings, a better quality work environment, and ability to demonstrate environmental leadership.

As of January 1, 1998, ENERGY STAR Buildings and Green Lights Partnership participates reduced their energy use by 4.7 billion kilowatt hours and annually saved more than $341 million. Cumulatively, participants have prevented the emissions of 1.7 million metric tons of carbon equivalent (MMTCE) — the equivalent to removing the pollution from 1.5 million cars. EPA predicts that by the year 2000 more than 5.5 MMTCE of carbon dioxide will be prevented by the ENERGY STAR Buildings and Green Lights Partnership.

To assist participants, EPA has developed and continually updates technical, outreach, and marketing tools to ensure quality energy-efficiency upgrades. Participants benefit from support including workshops, unbiased technical information, software packages, customer service representatives, upgrade manuals, recent case studies describing innovative implementation, and a user hotline. These tools are designed to ensure that building upgrades maximize energy savings, return on investment, and pollution prevention.

CONTACT INFORMATION

For further information, please contact ENERGY STAR Buildings Program Manager (Mail Code 6202J) or visit the website at http://www.epa.gov\buildings. THE ENERGY STAR Hotline number is 888-STAR-YES (1-888-782-7937) the fax number is (202)564-2083.

8. ENERGY STAR RESIDENTIAL PROGRAMS

HISTORY

The Residential ENERGY STAR Programs are market-based initiatives to prevent pollution by reducing energy use in the residential sector. Working through a combination of several voluntary programs, including ENERGY STAR Homes, ENERGY STAR Products Labeling, ENERGY STAR Billing and innovative financing, EPA implements a comprehensive strategy to profitably prevent pollution. The programs were launched in April 1995 and are already helping many Americans save money while preventing pollution.

GOAL

The US EPA promotes residential energy efficiency because household energy use contributes to air pollution, including 20 percent of all U.S. emissions of carbon dioxide. It also accounts for 26 percent and 15 percent of sulfur dioxide and nitrogen oxides, respectively. By using more energy efficient appliances and heating and cooling equipment, and by constructing more energy efficient homes, we can reduce this pollution — save money at the same time! Expected commitments by ENERGY STAR residential partners in 2000 will save $1.8 billion in energy bills and prevent 5 million metric tons of carbon equivalent (MMTCE) emissions.

PARTICIPATION

The ENERGY STAR Residential Programs will provide opportunities for numerous groups. In the ENERGY STAR Homes Program, EPA works with builders to build new homes that are at least 30 percent more efficient than the 1993 Model Energy Code (MEC). Qualifying builders identify their efficient homes to home buyers by using the ENERGY STAR logo and offer home buyers access to a variety of financing options linked to ENERGY STAR Homes.

EPA signs partnership agreements with industry-leading manufacturers of products that meet specific target performance levels. ENERGY STAR products, identified by the logo, are typically at the top 20 percent of energy efficiency. EPA is working with a wide variety of utility partnerships to market and sell ENERGY STAR products.

The ENERGY STAR Homes and Products Labeling programs are profitable for builders, manufacturers and consumers. Through energy efficiency consumers save money by reducing their energy bills. Innovative financing provide long-term, reduced or no-down payment loans to consumers where net monthly energy savings exceed the monthly loan payments, thereby making ENERGY STAR upgrades profitable for consumers from day one.

Utilities participating in ENERGY STAR Billing offer their customers information on how much energy they are using relative to other similar customers. This empirical data feedback expands the service utilities, offer at extremely low cost while potentially driving demand for other valued utility programs.

BENEFITS OF PARTICIPATION

EPA's residential programs provide a sustainable process for transforming the residential marketplace to more efficient existing and new housing in addition to preventing pollution. These programs will provide opportunities for numerous groups, including the following;

- Homeowners can enjoy lower utility bills, often with improved comfort and features while making competitive returns on their investments.

- New home builders are in a position to sell more homes with greater product differentiation and no extra out-of-pocket costs to home buyers.

- Home improvement industry will have a wide array of new products and services they can offer profitably;

- Utilities can transition from rebate programs to low-cost programs that provide valued customer services highly suited to forthcoming competitive markets; and

- Product manufacturers, distributors, and vendors will have expanded markets and increased sales of their high-efficiency products.

For more information, contact the ENERGY STAR Hotline at 1-(888)STAR-YES.

9. ENERGY STAR OFFICE EQUIPMENT

GOAL

Research has shown that much of the electricity consumed by office equipment is wasted since many products are left on the extended periods of time when not in use. EPA's ENERGY STAR Office Equipment program is a voluntary program for office equipment manufacturers to address this problem. Office product manufacturers are asked to develop computers, monitors, printers, fax machines, copiers multi-function devices and scanners that can power-down or "sleep", reducing wasted energy by approximately 50% total.

A Presidential Executive Order, in effect since October, 1993, directs U.S. agencies to purchase only desktop computers, monitors, and printers that meet EPA ENERGY STAR guidelines for energy efficiency. This Executive Order should save taxpayers $40 million annually. EPA urges private and other public organizations to commit a similar ENERGY STAR purchasing policy that includes all ENERGY STAR office equipment products.

RESPONSIBILITIES OF MEMBERSHIP

Computer manufacturers agree to produce computers and monitors capable of achieving a low-power state during times of inactivity. EPA defines a "low power state" as less than or equal to 8 watts for the monitor and 30 watts for the computers. "High" end" computers and "workstations" are allowed slightly more power based on the size of their larger power supplies.

Similarly, Printer and Fax Partners agree to manufacture equipment capable of entering a low- power state. "Low power state" varies from 15-45 Watts depending on the output specifications (pages per minute) of the device.

Copier and multi-function devise manufacturers agree to produce machines that automatically power down and then turn off when not in use after a specific period of time depending on time output specifications (pages per minute). Scanner manufacturers agree to produce desktop scanners that power-down to 12 watts or less after sitting idle for 15 minutes or less.

PARTICIPATION

ENERGY STAR office equipment continues to gain market penetration. In 1995, the last year for which data are available, over 90% of monitors, faxes and printers sold in the United States met ENERGY STAR specifications.

BENEFITS OF PARTICIPATION

ENERGY STAR Partners selling compliant products may use the ENERGY STAR logo to label their equipment. Partners may also promote their efficient products by using the logo in advertisements, brochures and catalogues.

For more information, contact Andrew Fariana, Program Manager at 202/564-9019.

10. ENERGY STAR TRANSFORMER PROGRAM

HISTORY

The ENERGY STAR Transformer Program was launched on April 10, 1995. The Program has three distinct membership categories: Utility Partners, Manufacturing Partners, and Allies. Approximately 10 percent of the electric utility industry (as measured by utility purchases) are currently Partners in the program.

GOAL

The ENERGY STAR Transformer Program's goal is to encourage the use of high-efficiency distribution transformers by utilities where they are cost-effective. Utility Partners agree to analyze their transformer purchases using the industry's highest standards and buy transformers which qualify for the ENERGY STAR designation where cost-effective. Currently, 41 utilities have signed up for the program. Manufacturing partners agree to produce and market ENERGY STAR transformers. Currently, 9 transformer manufacturers, representing 80 percent of utility transformer sales, have signed on as Program Partners. Finally, ENERGY STAR Allies agree to produce transformer components and materials which play a critical role in determining transformer efficiency.

Over 61 billion kilowatt hours of energy is lost each year in electric distribution transformers, or more than two percent of annual U.S. power generation. On average, each of the one million transformers purchased each year by U.S. power generation. On average, each of the one million transformers purchased each year by U.S. electric utilities result in over 33,000 kilowatt hours of energy losses over its lifetime. The resulting emissions over the service lives of these transformers are huge: over 20 tons of carbon dioxide, 150 kilograms of sulfur dioxide and 60 kilograms of nitrogen dioxide. In most of these cases, energy losses and the attendant emissions can be cost- effectively reduced by 10-40 percent using available transformer technologies.

BENEFITS OF PARTICIPATION

EPA recognizes ENERGY STAR Transformer Partners through newsletters, articles, media events, and public service advertisements, thereby increasing public awareness of their efforts to reduce greenhouse gas emissions while lowering system costs. EPA has developed three software models and other technical tools that assist utility efforts to optimize transformer purchases and minimize air emissions which result from excess energy losses.

For more information, contact ENERGY STAR Program Manager at 202/564-9432.

11. ENVIRONMENTAL ACCOUNTING PROJECT

HISTORY

The Environmental Accounting Project began in 1992 in response to EPA's stakeholders' concerns that industry could not adopt pollution prevention (P2) as the first choice in environmental management until managerial accounting practices were modified to highlight the costs associated with non-prevention approaches and the economic benefits of P2. EPA convened a focus group of experts to study the issue, and then, in December 1993, with the Institute for Management Accountants, the American Institute for Certified Public Accountants, the U.S. Chamber of Commerce, the Business Roundtable, and the American Association of Cost Engineers, co- sponsored a Stakeholders' Action Agenda meeting that was attended by 100 representatives from industry, academia, government, and environmental organizations. Attendees developed action agenda for ten different stakeholder groups. For the following three years the Environmental Accounting Project used the Federal Government Action Agenda developed at that meeting as its plan for action. The Project works with partner organizations in industry and a wide variety of other sectors to advance environmental managerial accounting concepts and methodologies. Its supports informational exchanges, codification of concepts and terminology, research, case study development, training, and the development of methodologies for highlighting the financial benefits of P2.

GOAL

To encourage and motivate business to understand the full spectrum of their environmental costs, and integrate these costs into decision-making.

COMPANY PARTICIPATION

The Project maintains a Network of over 800 members, over a fourth of whom are from industry. The Project also works closely with companies as part of its case study development process. Completed case studies focus on corporate-wide environmental accounting (EA) efforts at AT&T and Ontario Hydro. Nearing completion is a series of short case studies that will demonstrate the application and benefits of EA concepts in a variety of business decisions. These case studies will be posted on the Project's website and companies will be invited to contribute additional case studies of their own. The Project is also developing major case studies to highlight companies' application of EA in materials management practices.

BENEFITS OF PARTICIPATION

Businesses incur a wide variety of environmental costs, including energy usage charges, investments in control equipment, salaries of environmental professionals, remediation costs, and public relations costs. An increased focus on these costs and the closer tracking of these costs to the responsible products and processes give managers an incentive to identify opportunities for reducing or eliminating those costs. As a result, environmental health & safety and other staff may be in a better position to financially justify the development of an environmental management system, participation in federal and state environmental voluntary programs, and the implementation of pollution prevention options. Companies can then achieve improved environmental performance, gain competitive advantage, and enjoy cost savings or enhanced revenues. Members of the EPA's Environmental Accounting Network are listed in the Network Directory, which acts as a networking tool for those interested in sharing information on EA activities world-wide. Members also receive updates of Project products and activities.

PROGRESS

Since the inception of the Environmental Accounting Network four years ago, its membership has octupled. The Project's product and activity successes include:

- *An Introduction to Environmental Accounting as a Business Management Tool: Key Concepts and Terms,* a primer on basic EA and application options. This primer is used in business school environmental management courses and in corporate environmental training. The British Association of Certified Chartered Accountants, the world's largest accounting organization, reprinted the primer for distribution to its own membership, and the Japanese Institute of Certified Public Accountants distributes the primer in both English and Japanese.

- *Environmental Cost Accounting for Capital Budgeting: A Benchmark Survey of Management Accountants,* a status report on the extent to which the nation's manufacturing firms consider environmental costs when evaluating potential investments.

- Development of:
  1) workshops and conferences for industry and government and
  2) training for small business-oriented technical assistance providers and management advisors.

- Support of the development and upgrade of P2/FINANCE, a software tool designed to help companies incorporate environmental costs into their capital budgeting decisions.

- *Applying Environmental Accounting to Electroplating Operations: An In-Depth Analysis.*

- *Environmental Cost Accounting for Chemical and Oil Companies: A Benchmarking Study,* a report on the form and functions of EA systems of five major U.S. and Mexican companies.

- *Valuing Potential Environmental Liabilities for Managerial Decision-Making: A Review of Available Techniques,* which describes approaches and tools that have been developed specifically to estimate the monetary value of preventable environmental liability costs.

FUTURE

In January 1997 the Project began a process of studying the progress of EA issues in order to reevaluate the Project's strategy. The process began with a meeting of environmental management experts and has continued as a dialogue with the members of the Environmental Accounting Network. The Project's current and planned activities are intended to address the key recommendations that arose in this process. Those activities include:

- Development of an environmental costing handbook, with an emphasis on the use of activity-based costs to meet environmental management objectives.

- Research on the relationship between health and safety issues and environmental accounting.

- Development of environmental accounting templates compatible with off-the-shelf commercial accounting software packages widely used by small businesses.

- Exploration of possibilities for drawing more fully from life cycle management and life cycle costing frameworks and tools.

- A report compiling the findings of research on 1) how companies factor risk into the financial evaluation of P2 investments and 2) organizational barriers to the adoption of P2 technologies.

Contact Information

Environmental Accounting Project products are available from ***EPA's Pollution Prevention Information Clearinghouse (202/260-1023) and through its website at www.epa.gov/opptintr/acctg.***

For more information on the Environmental Accounting Project, contact Susan McLaughlin at 202/260-3844 or Kristin Pierre at 202/260-3068.

12. ENVIRONMENTAL LEADERSHIP PROGRAM

HISTORY

The Environmental Leadership Program (ELP) is designed to recognize and provide certain benefits to facilities demonstrating strong commitments to continued compliance with existing laws and to "beyond compliance" efforts. The program formally began in June 1994 with a Federal Register notice requesting proposals for pilot projects that would demonstrate state-of-the-art environmental and compliance management systems, independent audits and self-certification, public accountability and involvement, pollution prevention approaches, and mentoring.

GOALS

- Better environmental and human health protection by promoting a systematic approach to managing environmental issues and be encouraging environmental enhancement activities (e.g., biodiversity, energy conservation);
- Increased identification and timely resolution of environmental compliance issues;
- Multiplying assistance efforts by including industry as mentors; and
- Fostering constructive and open relationships between agencies, the regulated community, and the public.

COMPANY PARTICIPATION

Ten private companies and two federal facilities tested the design of specific elements of the program during a one-year pilot phase. Criteria for the full-scale program have been developed and the program is open to any public, private, or federal facility that meets the program criteria.

BENEFITS OF PARTICIPATION

Participants will receive public recognition by EPA and participating states for their efforts. In addition, EPA and participating State agencies will reduce or modify discretionary inspections for the duration of ELP participation. There will also be a self-correction period (generally 60 days) for violations to be corrected without a civil penalty action being taken against the facility, contingent upon certain conditions having been sent.

PROGRESS

The pilot phase ended in August 1996. Products and final reports from each pilot are available electronically via the World Wide Web on the Internet (http://es.inel.gov/elp) and in hard copy through the Pollution Prevention Information Clearinghouse (202-260-1023). A national ELP stakeholders conference was held in November 1996 and the proposal for the full-scale program has undergone Agency review and concurrence. Entry criteria for the program include a mature environmental management system, a compliance and EMS auditing program, community outreach/employee involvement programs, environmental enhancement activities and a history of complying with environmental requirements.

FUTURE
The framework for the full-scale program will be identified in the Federal Register with a goal of early 1998 for implementing the program.

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13. GREEN CHEMISTRY PROGRAM/GREEN CHEMISTRY CHALLENGE

HISTORY

Shortly after the passage of the Pollution Prevention Act of 1990, the Office of Pollution Prevention and Toxics (OPPT) began to explore the idea of developing new or improving existing chemical products and processes to make them less hazardous to human health and the environment. In 1992, OPPT launched a model research grants program called "Alternative Synthetic Pathways for Pollution Prevention". Since that time the Green Chemistry Program has built collaborations with other federal agencies, industry, and academia to promote the use of chemistry for pollution prevention through completely voluntary partnerships.

GOALS

The goal of the Green Chemistry Program is to promote the development of products and processes that reduce or eliminate the use or generation of toxic substances associated with the design, manufacture, and use of chemicals. The Green Chemistry Program was established to recognize and promote fundamental and innovative chemical technologies that accomplish pollution prevention in a cost effective manner. The program seeks to support research in the area of environmentally benign chemistry, promote partnerships with industry in developing green chemistry technologies, and work with other federal agencies in building green chemistry principles into their operations.

CURRENT GREEN CHEMISTRY PROJECTS

Green Chemistry Challenge

The Green Chemistry Challenge program was announced by President Clinton on March 16, 1995, as part of the Reinventing Environmental Regulations Initiative. This program was designed to promote pollution prevention and industrial ecology through a new EPA Design for the Environment partnership with the chemical industry. Through high level recognition and support, the Green Chemistry Challenge promotes fundamental breakthroughs in and innovative uses of green chemistry for pollution prevention. OPPT continues to work cooperatively with academia, industry, government, and the scientific community in general to manage this program. ***For more information, contact Tracy Williamson at 202/260-3960.***

SMART Review Program

Concurrent to its regulatory review of new chemical substances for health and/or environmental risk OPPT is also assessing the pollution potential associated not just with new chemicals, but also with their manufacture. The objective of the assessment is to first identify the source and type of pollution associated with the new chemical, its manufacture, and its use. The assessment then focuses on how the new chemical or its manufacture can be improved upon through the implementation of one or more green chemical methods, including the use of an alternative synthetic pathway, use of alternative reaction conditions, or optimization of process efficiency. All green chemical methods identified by OPPT as potential solutions to reducing the pollution associated with a new chemical or its manufacture are suggested to the submitting company for its voluntary consideration. ***For more information, contact Greg Fritz at 202/260-7174.***

Green Chemistry Research

Fundamental research in green chemistry is essential in providing industry with the chemically- viable tools and methods necessary in their development of products and processes that are more environmentally benign. Industry input in fundamental green chemical research is important in ensuring that the tools and methods developed are also economically-viable. To accomplish this goal, OPPT continues to support various funding mechanisms such as the model research grants program called "Alternative Synthetic Pathways for Pollution Prevention." OPPT continues to work in partnership with the Los Alamos National Laboratory in support of fundamental green chemical research in the area of alternative solvents/reaction conditions, and in particular in the use of supercritical fluids such as carbon dioxide as alternative solvents. OPPT also continues to work cooperatively with the National Science Foundation in support of basic green chemical research through an annual "Technology for a Sustainable Development" solicitation. To date, almost twenty million dollars of support in the form of grants have been made available for green chemical research. ***For more information, contact Tracy Williamson at 202/260-3960.***

Green Chemistry Curriculum Development

One factor that can greatly speed the incorporation of pollution prevention into industrial manufacturing processes is addressing pollution prevention issues in the classical chemistry curriculum. To accomplish this goal, OPPT supports a variety of educational efforts that include the development of materials, tools, and courses to assist in the training of professional chemists in industry and in the education of students in academia. Consequently, the chemical industry is discovering that when their professional chemists are knowledgeable about pollution prevention concepts, they are able to identify, develop, and implement effective pollution prevention technologies. It is therefore imperative that chemists be educated on pollution prevention concepts during their academic training in order for pollution prevention to become a standard in industry. Materials under development include a green chemistry reference compendium, textbook, supplements, and laboratory manuals. Tools under development include databases of green chemistry examples and multimedia tools such as videos and compact discs. Courses under development include a training course for professional chemists, and "train the trainer" workshops targeting the quick incorporation of green chemistry concepts and examples in 2-year college curricula. ***For more information, contact Tracy Williams at 202/260-3960.***

Scientific Outreach

In order for pollution prevention through green chemistry to become a standard in industry, both the concept and the science must be effectively communicated to all sectors of industry and the scientific community in general. OPPT outreach projects include participating prominent scientific meetings such as American Chemical Society National Meetings, Gordon Research Conferences, the 36th International Union of Pure and Applied Chemistry Congress, and the 5th North American Chemical Congress; publishing in scientific journals and books; and developing and disseminating computational tools and databases. In addition, OPPT, with approximately a dozen other co-sponsors, recently organized the first national Green Chemistry and Engineering Conference in June of 1997. ***For more information, contact Tracy Williams at 202/260-3960.***

14. INDOOR ENVIRONMENTS PROGRAM

HISTORY

The Indoor Environments Program was formed during the summer of 1995 when two existing programs, Radon and Indoor Air, were joined as part of the Agency's streamlining program. These two programs have made considerable progress over the past decade in an effort to lead the public to an increased understanding of the significance of Indoor Air Quality (IAQ) and its effect on public health. IAQ is widely recognized as among the highest environmental risks people face on a day-to-day basis1. In fact, the recent Presidential Commission on Risk Assessment and Risk Management report identified indoor air quality as a serious environmental health risk that requires increased attention and action. To address this issue, the Agency uses voluntary relationships with State governments and a wide array of public and private organizations to inform and encourage individuals and institutions to take the often simple and low-cost steps necessary for reducing IAQ risks.

The non-regulatory Indoor Environments Program employs a cooperative partnership program model, enlisting State governments, as well as national medical, consumer, public interest, and private sector groups to pursue common goal of public health protection and good IAQ business practices. To date, 47 States and more than 35 national organizations like the American Lung Association, the American Medical Association, the National Council of Negro Women and the National Association of Counties have established partnerships with the Indoor Environments Program, and in turn, have created results-oriented partnerships with over 700 state and local affiliated organizations. Using the best science available, the Indoor Environments Program develops and disseminates information, guidance and solution-based technologies. The Program serves as a catalyst for action by guiding research, using innovative and creative risk communication tools, and building public/private
partnerships.

GOALS

Our primary goals is to:

- Ensure that the air quality in all indoor environments will protect and promote human health and welfare.

The goal is accomplished by: establishing and prioritizing quantitative public health targets for indoor air contaminants using state-of-the-art scientific and policy analysis; developing and implementing action plans to modify the legal, economic, and institutional arrangements through which indoor environments are created so that these arrangements enable and support improvements in indoor air quality; improving public awareness of and support for indoor air quality and promoting action by targeted publics; and developing data and information to fill existing knowledge gaps through scientific and technical studies and by coordinating and guiding research.

[1]Unfinished business a comparative assessment of environmental problems. U.S. EPA, Office of Policy Analysis, Office of Policy, Planning and Evaluation. Washington, DC: U.S. Government Printing Office; 1987. Also, Reducing risk: setting priorities for environmental protection. U.S. EPA, Science Advisory Board, SAB-EC-90- 021. Washington, DC: U.S. Government Printing Office; 1990. Also Presidential/Congressional Commission on Risk Assessment and Risk Management, Report. Volume II, March 7, 1997.

The Indoor Environments Program has identified the following environmental milestones to date:

> Objective: By 2005, 15 million more Americans will live or work in homes, schools, or office buildings with healthier indoor air than in 1994.
>
> Subobjective: To reduce lung cancer, respiratory diseases and other health problems, by 2005, 11.5 million more Americans will be exposed to healthier indoor air in their homes. This will include the mitigation of 700,000 homes with high radon levels and the construction of one million homes with radon-resistant construction techniques, and the reduction of the proportion of households in which children 6 and under are regularly exposed to smoking from 27% in 1994 to 15%.
>
> Subobjective: To reduce IAQ-related illness, by 2005, 5% of office buildings will be managed with good IAQ practices consistent with EPA's "Building Air Quality" guidance.
>
> Subobjective: To reduce health problems in the nearly 10 million children made ill annually from indoor air problems in schools, by 2005, 15% of the nation's schools will adopt good practices consistent with EPA's "IAQ Tools for Schools" guidance.

BENEFITS OF PARTICIPATION

When an organization becomes a cooperative partner with the Indoor Environments Program, it gains access to training programs, technical assistance, public information materials, a myriad of skills, public health expertise, communication techniques and other resources which the EPA and other Indoor Environments partners use to advance public knowledge and action. It allows the partners to enhance the ability to achieve their respective organizational missions.

PROGRESS

To date, about 70 percent of the American public is aware of radon. 11 percent of the public has tested their homes for radon, while over 350,000 American homes have been fixed to reduce radon levels. Over 1,200,000 homes have been built using radon-resistant construction methods. 6,800 schools are currently implementing holistic IAQ management plans, and more than 10,000 copies of EPA's IAQ "Tools for Schools" management plans have been distributed to schools and school districts nationwide. 1,800 stationary engineers of office buildings who manage over 1 billion square feet of building space have been trained in techniques for improving indoor air quality in their facilities. At least 18,000 state and local officials, private sector personnel, and building owners and managers have been trained to address indoor air problems.

FUTURE

In the future, the Indoor Environments Program will continue to establish effective partnerships with organizations representing a range of target audiences to provide citizens and industry with the information they need to take steps to reduce their risks from indoor air problems. This program will also continue to work toward the goal that pollution prevention, and the efficient resolution of indoor air quality problems of all types, will become a routine aspect of the design, construction, maintenance, and operation of public and commercial buildings, homes, health and day care facilities, educational institutions, and all indoor spaces.

15. LANDFILL METHANE OUTREACH PROGRAM

HISTORY

The Landfill Methane Outreach Program (LMOP) was launched on December 1, 1994, with 13 State Allies and 12 Utility Allies. A third component of the LMOP, the Industry Ally Program, was launched on April 10, 1995, with over 30 industry allies. These Charter LMOP State, Utility, and Industry Allies have been working with EPA to oversee the barrier to environmentally and economically beneficial landfill gas energy recovery. Since its inception, the LMOP has provided information and project facilitation services to numerous organizations, including public, private, and individuals.

Landfills are the largest source of anthropogenic methane emissions in the U.S., constituting almost 40 percent of these emissions each year. Methane is a potent greenhouse gas; each pound of methane emitted from a landfill is about 21 times more effective at trapping radiation in the atmosphere than a pound of carbon dioxide. Recovery and use of methane from landfills substantially reduces these emissions while capturing their energy value. EPA estimates that up to 700 landfills could economically recover their methane for energy, yet only about 150 projects are in place.

GOAL

The LMOP's goal is to spur development of environmentally and economically beneficial landfill gas-to-energy projects across the country by overcoming barriers.

PARTICIPATION

State energy and environmental agencies participate as State Allies, which work with EPA to identify and implement options to enhance landfill gas energy recovery. There are currently 19 State Allies in the LMOP. Investor-owned and municipal utilities electric cooperatives and power marketers participate as Energy/ Utility Allies, which work with EPA to develop strategies for taking advantage of the best opportunities to add landfill gas to energy portfolios. There are currently 18 Energy/Utility Allies in the LMOP. Landfill gas-to-energy developers, consultants, equipment suppliers, and other project development service companies participate as Industry Allies. Industry Allies work with EPA to formulate aggressive landfill gas development strategies, and designate representatives for EPA's Expert Network. There are currently over 90 Industry Allies in the LMOP.

BENEFITS OF PARTICIPATION

EPA recognizes LMOP participants through newsletters, articles, media events, and public service advertisements, increasing public awareness of their efforts to reduce greenhouse gas emissions while developing a renewable energy resource. EPA also provides implementation support for each step of the Program. EPA has developed many handbooks and information tools, including the Project Development Handbook, state-by-state profiles of candidates landfills, and E-plus, the LMOP's own Project Economic Evaluation Software. ***For more information, contact Tom Kerr, Team Leader at 202/564-9768.***

16. NATURAL GAS STAR PROGRAM

HISTORY

The Natural Gas Star Program is a voluntary program that works closely with the natural gas industry to reduce emissions of methane (the primary component of natural gas). The program was created in 1993 and original focused in transmission and distribution sectors (The program now expanded to include the production and processing sectors in March, 1995. Natural Gas STAR encourages companies to adopt cost-effective best management practices (BMPs) that reduce leaks and losses of natural gas. Partners are also encouraged to consider implementation of "additional" BMPs that may be profitable for their companies. In this capacity, Natural gas STAR works as a very effective technology transfer program for promoting innovative processes and technologies.

Leaks and emissions from the natural gas industry are large sources of anthropogenic methane emissions in the U.S., constituting almost 14 percent of these emissions each year. Methane is a potent greenhouse gas; each pound of methane emitted from the natural gas industry is about 21 times more effective at trapping radiation in the atmosphere than a pound of carbon dioxide.

GOAL

The Natural Gas STAR Program's goal is to reduce emissions of natural gas using cost-effective pollution prevention processes and technologies. It is estimated that the Program will reduce emissions by more than 44 billion cubic feet (Bcf) worth an estimated $90,000,000 by the year 2000. This quantity of gas could heat 500,000 homes, and equates to the removal of 3,000,000 cars from U.S. roads.

PARTICIPATION

The Natural Gas STAR Program has reduced emissions by over 25 billion cubic feet, equal to approximately $50 million. This is enough gas to heat 125, 000 homes per year, equating to the removal of 750,000 cars from our nations roads.

BENEFIT OF PARTICIPATION

EPA provides support for Partners by assisting with program implementation through workshops, newsletters, and public service announcements; providing Partners with technical expertise on new technologies and processes; removing justified regulatory barriers; providing Partners with public recognition and recognizing Partners for prior practices consistent with the program. Because the industry is geographically dispersed, the program has to contend with many different state laws and regulations. Working closely with regional EPA offices and state agencies, the program has been successful in removing barriers that prevent the use of pollution prevention as a method for reducing emissions. ***For more information, contact Rhone Resch at 202/260-9793.***

17. PESTICIDE ENVIRONMENTAL STEWARDSHIP PROGRAM

HISTORY

In June 1993, the National Academy of Sciences released its report on pesticides in the diets of children. In response, EPA committed to reducing the risks to children by working with farmers and commodity groups. Also, at a Congressional hearing on September 22, 1993, the U.S. Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), and the Food and Drug Administration (FDA) pledged to have 75 percent of the U.S. agricultural acreage under Integrated Pest Management by the year 2000 and to work with commodity groups to reduce the use of pesticides. The Pesticide Environmental Stewardship Program (PESP), which was first called the Reduced Risk/Use Initiative, began that day."

GOAL

The PESP is a voluntary partnership program to reduce agricultural and nonagricultural pesticide risk.

PARTICIPATION

All organizations with a commitment to pesticide risk reduction are eligible to join PESP, either as a Partner or Supporter.

Partners are organizations that use pesticides or represent pesticide users. Partners agree to develop and implement formal strategies to reduce the risk of pesticides. Partners further commit themselves to define and implement their strategies in a timely fashion to report to EPA regularly on progress. There are 82 Partners enrolled in PESP.

Supporters are organizations that do not use pesticides, but do not have significant influence over pest management practices. Food processors, for example, may influence the use of pesticides on produce they buy, even though they do not apply pesticides on the produce themselves. Supporters may include public interest groups whose constituencies have a strong interest in pesticide risk reduction. Unlike Partners, Supporters do not need to develop formal pest management strategies. Instead, they agree to promote programs that facilitate risk reduction. There are currently 17 Supporters participating in PESP.

GUIDING PRINCIPLES

PESP is governed by the following guiding principles:

- Participation is completely voluntary:
- Partners agree to develop environmental stewardship strategies and implement specific pest management practices designed for pesticide use/risk reduction.
- The federal government recognizes the need to protect public health and food in the U.S. with efficient, cost-effective pest control.
- Through research, education, and other means, the federal government will seek to promote and fund the adoption of alternative techniques and practices that enhance pest management and reduce pesticide risks.

- The federal government will integrate the environmental stewardship strategies developed by member organizations into its policies and programs for agriculture and the environment.

- The federal government will lead by example with its own use practices.

BENEFITS OF PARTICIPATION

Joining PESP gives organizations the opportunity to demonstrate a commitment to environmental stewardship and to take steps to put this commitment into practice.

On joining PESP, each Partner or Supporter is assigned a liaison who serves as the organization's official contact with EPA. The liaison can help obtain information not only about the partnership, but about other EPA programs, policies, and procedures. Further, the contact can help express an organization's concerns of EPA management and ensure that these views are considered as the agency develops pesticide regulations and makes decisions on agricultural procedures.

As funds allow, EPA and USDA provide Partners with seed money to help support pest management practices and that reduce pesticide risk. In addition, Partners participate in the identification of needs for research on alternative systems for pest management, as provided for in the Memorandum of Understanding between EPA and USDA.

The PESP publicly recognize Partners and Supporters that demonstrate their commitment to environmental stewardship and achieve progress in reducing pesticide risks will cost effectively managing pests. ***For more information, contact Anne Leslie at 703/308-8727 or fax at 703/308-7026.***

18. PROJECT XL

HISTORY

President Clinton created Project XL with his March 16, 1995 Reinventing Environmental Regulation initiative. This program is designed to give regulated sources the flexibility to develop alternative strategies that will replace or modify specific regulatory requirements on the condition that they produce greater environmental benefits and extensively involve local stakeholders. A May 23, 1995 Federal Register notice solicited project proposals and the President subsequently announced the first eight XL pilots on November 3, 1995. The President described XL projects as giving regulated entities an opportunity to develop models for a new, performance-based environmental management system for the next century — one that emphasizes better bottom-line results for protecting public health and the environment.

GOALS

EPA is interested in choosing no more than 50 projects to become XL pilots. Each project should be able to achieve environmental performance that is superior to what would be achieved through compliance with current and reasonably anticipated future regulation and should involve local stakeholders. A successful proposal will develop alternative pollution prevention reduction strategies that meet eight criteria — better environmental results; cost savings and paperwork reduction; stakeholder support; test of an innovative strategy; transferability; feasibility; identification or monitoring, reporting, and evaluation methods; and avoidance of shifting risk burden. "Cleaner results" can be achieved directly from the project in activities that produce greater environmental results. Explicit definitions and measures of "cleaner results" should be included in the project agreement negotiated among stakeholders. XL pilots are intended to test new approaches that can be incorporated into the Agency's regulations and policies and applied to other facilities in the same industry or to other industries. EPA is, therefore, most interested in pilot projects that test new approaches that could one day be applied more broadly. EPA invites private and public entities or groups of entities regulated by EPA under its various statutory authorities to submit proposals.

BENEFITS OF PARTICIPATION

Participants are given the flexibility to develop common sense, cost-effective strategies that will replace or modify specific regulatory requirements, on the condition that they produce greater environmental benefits. Based on the premise that these participants know better than the federal government how to reduce their pollution, Project XL reduces the regulatory burden and promotes economic growth while achieving better environmental and public health protection.

PROGRESS

At the end of December 1997, Project XL project sponsors were implementing innovative pilots to achieve superior environmental benefits in exchange for regulatory flexibility. Several more project agreements are now being negotiated and will be finalized by the end of the year.

FUTURE

Additional XL projects will be selected on a rolling basis up to a maximum of 50 projects. Evaluation of the pilots will help identify new approaches that can be incorporated into the Agency's programs. ***More information is available on the Internet at: http://www.epa.gov/ProjectXL, via Project XL's fax-on-demand line at 202/260-890, or via Project XL's Information Line at 703/934-3239.***

19. THE RUMINANT LIVESTOCK EFFICIENCY PROGRAM

HISTORY

The Ruminant Livestock Efficiency Program is a collaborative effort between EPA and USDA that promotes cost-effective methods for reducing methane emissions from ruminant livestock. This program was launched upon release of the U.S. Climate Change Action Plan in October 1993.

Domesticated ruminant livestock are responsible for approximately 21 percent of U.S. methane emissions. Methane is produced naturally by ruminant animals as feed is fermented in the rumen by anaerobic bacteria. Because methane is derived from a portion of carbon in the animal's diet, reducing methane emissions is to improve animal productivity. This will allow more of the carbon in the feed to be routed toward milk and meat production, and less of it toward methane. This program encourages livestock producers to adopt best management practices for improving the efficiency of beef and dairy production thereby reducing methane emissions.

GOAL

The goal of the Ruminant Livestock Efficiency Program is to reduce 2.2 million metric tons of carbon equivalent of methane emissions by the year 2000 by improving ruminant productivity. Specific actions for improving productivity include improved grazing management, strategic dietary supplementation, the use of production enhancing technologies, improved animal health, improved genetics and reproduction.

PARTICIPATION

The program is focusing outreach efforts on cow-calf producers in the best industry. Improved management practices are being promoted initially to producers of the southeast and the intermountain west. The program has three main components:

1. Field studies - Researchers are using a methane measurement technique on cattle to refine emissions estimates, identify nutritional deficiencies, test candidate management options for production performance and methane emissions reduction potential, and to document the economics of emissions reduction.

2. NRCS Demonstration Farms - In each of eleven southeastern states, model farms are being selected to demonstrate the benefits of improved management practices. "Best practices" identified in the field studies will be incorporated into the demonstrations.

3. Outreach and Education - Economic and technical information gathered in the field studies and on the demonstration farms will be incorporated into existing NRCS and state extension programs for use nationwide. Specific tools used for information dissemination include brochures, video, newsletters, demonstrations, workshops, training and site visits.

BENEFITS OF PARTICIPATION

The main benefit realized by participating producers is improved efficiency of beef production. Be cause of small profit margins and the competitive nature of the industry, beef producers need to take advantage of every available technical advancement that will enhance their profitability. By adopting practices recommended by this program producers can make a positive contribution to the environment by

reducing methane emissions while they increase their profits. Additionally, many of the management improvements contribute to conservation of soil and water resources and protection of riparian areas. Participating producers are recognized by EPA for their environmental stewardship which enhances their public image. ***For more information, contact Mark Orlic at 202/564-9043.***

20. STATE AND LOCAL OUTREACH PROGRAM

HISTORY

The State and Local Outreach Program was created in 1989 and incorporated into the CCAP in 1993. The program forms partnerships with state and local governments to build capacity to understand the impact of climate change and reduce their greenhouse gas emissions. State and local authorities are critical players in the effort to reduce these emissions because they have jurisdiction over activities that contribute greenhouse gases, including land use, transportation, building codes, and waste management. Moreover, states and localities account for a significant percentage of national emissions of greenhouse gases.

GOALS

The mission of the program is to empower decision-makers at the state and local level to reduce greenhouse gas emissions by providing them with appropriate products and services. Through our efforts, state and localities will increase their understanding of risks and impacts of climate change; assess and develop mitigation and adaptation strategies that are cost-effective, environmentally sound, and equitable; and, implement, evaluate, and document program results.

PARTICIPATION

States become partners in one of three ways: 1) developing inventories of greenhouse gas emissions, which establish a baseline and help forecast future emissions; 2) developing and implementing mitigation programs and policy options that comprise State Action Plans; and 3) implementing innovative demonstration projects.

Cities and counties become partners in the State and Local Outreach Program through initiatives coordinated by the International Council for Local Environmental Initiatives (ICLEI). ICLEI organizes campaigns which provide incentives for local governments to conduct energy audits and emissions inventories, reduce energy consumption, and increase public awareness. One of these initiatives, the Green Fleets Project, provides incentives for energy savings in the transportation sector, while the most recent initiative, the "Cities for Climate Protection Campaign," addresses energy consumption in other sectors, including buildings and transportation.

BENEFITS OF PARTICIPATION

By identifying and implementing cost-effective measures and policies to reduce greenhouse gas emissions, states and localities can simultaneously save energy, save money, and foster technology- oriented business growth that helps create jobs. They also improve quality of life by alleviating such dilemmas as traffic congestion, shrinking landfill capacity, and air pollution.

The State and Local Outreach Program supports the energy and innovative ideas of states and localities by providing a host of activities and services. These include technical and financial assistance, workshops and training, guidance documents, software tools and analytical models, a database about other states' activities, and opportunities for recognition and profile.

PROGRESS

Presently 32 states, plus Puerto Rico, are partners in the Outreach Program:
Alabama, California, Colorado, Delaware, Georgia, Hawaii, Iowa, Illinois, Indiana, Kansas, Ken tucky, Massachusetts, Maryland, Maine, Minnesota, Missouri, Mississippi, Montana, North Carolina, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin.

Fifty cities and counties have joined the Green Fleets project or the Cities for Climate Protection Campaign. Participants in these programs include:
Albuquerque, NM; Aspen, CO; Atlanta, GA; Austin, TX; Berkeley, CA; Boulder, CO; Broward County; FL; Burien, WA; Burlington, VT; Chicago, IL; Chittenden County, VT; Chula Vista, CA; Dade County, FL; Delta County, MI; Denver, CO; Durham, NC; Fort Collins, TX; Hillsborough, NJ; Memphis, TN; Milwaukee, WI; Minneapolis, MN; Missoula, MT; Mount Rainier, MD; Newark, NJ; Oakland, CA; Olympia, WA; Orange County, FL; Overland Park, KS; Petersburg, VA; Pittsburgh, PA; Portland, OR; Prince George's County, MD; Saint Paul, MN; San Diego, CA; San Francisco, CA; San Jose, CA; Santa Fe, NM; Santa Monica, CA; Sarasota County, FL; Seattle, WA; Takoma Park, MD; Tampa, FL; Toledo, OH; Tucson, AZ; West Hollywood, CA.

Examples of program activities and successful innovative demonstrations projects including the following:

The Outreach Program completed a partnership in which it provided financial and technical assistance of the Interstate Renewable Energy Council (IREC). The IREC produced a referenced tool for state procurement managers, 'Procurement Guide for Renewable Energy Systems,' that served to increase purchases of renewable energy products and expand business opportunities for several dozen clean technology firms.

The "Plant Protection Program," jointly developed the Outreach Program, EPA's Atlanta office, and the National Retail Hardware Association, provides education materials and point-of-purchase displays to some 46,000 hardware stores and home centers in order to encourage consumers to purchase energy efficient home products.

The "Environmental Justice and Sustainable Communities Project" provides funding and technical support to low-cost, grass roots endeavors targeted toward low-income neighborhoods, disadvantaged communities, and Indian reservations. In 1995, eight projects are helping residents improve their quality of life while simultaneously reducing their emissions of greenhouse gases.

The Outreach Program held a workshop for partners to exchange ideas about reducing greenhouse gas emissions in their states. Over 60 people attended the conference.

The Outreach Program issues a publication, "Inside the Greenhouse," about state and local activities to reduce greenhouse gas emissions.

The Outreach Program developed a database of state greenhouse gas emissions and activities and placed it on the internet (http://www.epa.gov/globalwarming).

The Outreach Program now offers a Fax-on-Demand Line, in which interested parties can call (202) 260-2860 and receive free documents about the program and climate change issues and policies.

FUTURE

The State and Local Outreach Program will form partnerships with new constituency groups, leverage the activities of state and local organizations, and increase communication between state environmental and energy officials. We will continue to increase the number of states and localities that are partners in the program, develop analytic, communications and outreach projects, and assist states to transfer successful programs to other states. Outreach efforts include organizing guest panels at conferences to highlight successful voluntary efforts by states and localities, and speaking and participating in conferences.

21. TRANSPORTATION PARTNERS

HISTORY

The Transportation Partners program was initiated as part of President Clinton's 1993 Climate Change Action Plan (CCAP). CCAP directed EPA to develop an innovative, nonregulatory approach to reduce carbon dioxide emissions from the transportation sector which accounted for one-third of the carbon emissions in 1990 and is currently the fastest growing source of emissions in the U.S. Started in 1995, Transportation Partners is a cooperative program seeking to improve mobility in communities by increasing transportation choice through the adoption of measures providing or promoting the use of non-single occupancy vehicles.

GOAL

The Transportation Partners goal is to reduce the growth of vehicle miles traveled (VMT) through the promotion and adoption of various measures that provide a greater variety of transportation choices for citizens and thereby reducing carbon dioxide emissions. The program assists communities with assessing and designing transportation systems and networks best suited to the locality's needs. Transportation Partners promotes strategies such as transit- and pedestrian- friendly community design, economic or market-based incentives, and advanced technologies that enhance mobility and create sustainable communities. By increasing transportation choices and reducing dependency on single occupancy vehicles, Transportation Partner communities: reduce VMT and greenhouse gas emissions; improve air and water quality; decrease traffic congestion; reduce the need to construct costly new road capacity and highway expansion; preserve open space; and, improve the equity of transportation investments by improving the mobility of children, the elderly, handicapped, and low income people.

PARTICIPATION

The Transportation Partners program has nine cooperative agreements with nongovernmental organizations, "Principal Partners". These Principal Partners provide technical assistance and outreach to the 330+ "Project Partners" made up of local governments, businesses and citizen organizations.

PARTNERSHIP BENEFITS

Transportation Partners is a knowledge network, providing both direct technical assistance and broadcast information to program participants through publications, on-line resources, and peer- to-peer exchanges. Transportation Partners also sponsors the annual WAY TO GO! Awards which recognize and promote innovative transportation projects.

For more information, contact Paula Van Lare, Program Coordinator at 202/260-3729.
E-mail address: vanlare.paula@epamail.epa.gov.

22. U.S. INITIATIVE ON JOINT IMPLEMENTATION (USIJI)

HISTORY

Recognizing the enormous potential for cost-effective greenhouse gas (GHG) emission reductions in other countries, the U.S. created the U.S. Initiative on Joint Implementation (USIJI) as part of the CCAP. USIJI is a pilot program to help establish an empirical basis for considering approaches to joint implementation. The program provides a flexible, nonregulatory approach to encouraging international partnerships in environmentally sound projects that reduce or sequester GHG emissions and promote sustainable development.

GOALS

USIJI has several objectives including encouraging the development and implementation of cooperative, voluntary projects between U.S. and foreign partners aimed at reducing or sequesting GHG emissions, especially projects that promote technological cooperation and sustainable development. The pilot program is also intended to test and evaluate methodologies for measuring, tracking, and verifying costs and benefits of joint implementation projects and it establishes an empirical basis to contribute to the formulation of international criteria for joint implementation. Through participation in USIJI projects, countries are encouraged to adopt more complete climate action programs.

PARTICIPATION

Information gained from U.S. participants' projects will help contribute to the development of an international program for joint implementation and any future U.S. program on joint implementation. Participants are assured that any emissions reduced and sequestered by their USIJI projects will be tracked and recorded. USIJI participants will also receive public recognition for their efforts to reduce the threat of climate change and contribute to sustainable development. Technical assistance will be provided to participants in the areas of host country acceptance, establishing a greenhouse gas emissions baseline and measuring greenhouse gas emissions reduced and sequestered and guidance on monitoring and verifying greenhouse gas emissions.

PROGRESS

In February 1995, seven successful projects were announced and eight additional proposals were placed in development. The seven projects accepted in the first-round solicitation are: a preservation and sustainable forest management project in Belize; a renewable energy and two preservation and sustainable forest management projects in Costa Rica; a fuel switching/energy efficiency project in the Czech Republic; a renewable energy project in Honduras and an afforestation project in Russia.

Current projects represent private investments of more than $40 million and represent uniquely diverse partnerships among foreign participants and U.S. businesses, nongovernmental organization, and governments. Many of these projects involve technology and practices in settings that may open new market opportunities.

Other significant milestones include:

A Joint Statement of Intent on joint implementation signed by U.S. Vice President Al Gore and Costa Rica President Jose Maria Figueres on September 30, 1994.

The close of second-round solicitation on July 29, 1995, following a secretariat-sponsored workshop for 200 potential round-two domestic participants. Twenty-one projects were submitted and an announcement of accepted projects is planned for early November 1995. Additional proposals will be solicited in early 1996.

USIJI is the first and most developed joint implementation pilot program worldwide. Its international outreach activities and workshops have positively influenced international understanding of joint implementation and its broad acceptance by Parties to the Framework Convention on Climate Change. Other countries have announced pilot efforts closely modeled on USIJI. In light of the successful activities to date, an international pilot program was adopted in Berlin at the first Conference of the Parties in the Spring of 1995. Some developing countries have expressed open support for an international joint implementation pilot, including the presidents of seven Central American countries. Several participating countries - notably Costa Rica - have responded to the opportunity USIJI represents by moving forward aggressively on their own programs for reducing GHGs.

FUTURE

USIJI is completing a technical assistance program to develop specific guidelines and provide assistance to selected projects for emissions accounting, monitoring, and verification. The Secretariat also expects to facilitate host country involvement in proposals and assist participants in obtaining project financing through the Export-Import Bank, the Overseas Private Investment Corporation, and other financial institutions. USIJI will continue to solicit projects which seek to promote enable the development of flexible and innovative market-based international projects to reduce GHG emissions and promote sustainable development.

23. VOLUNTARY ALUMINUM INDUSTRIAL PROGRAM (VAIP)

HISTORY

The EPA Voluntary Aluminum Industrial Partnership (VAIP) is an innovative environmental stewardship and pollution prevention program developed jointly by the EPA and the U.S. primary aluminum industries. Companies joining the VAIP commit to make reductions in perfluorocarbon gas emissions (PFCs), potent greenhouse gases that may remain in the atmosphere for thousands of years. The VAIP Program was launched in April, 1995, with 10 partners. Since then, two additional companies have joined the VAIP. In total, the VAIP Partners represent 94 percent of the U.S. primary aluminum production capacity.

Aluminum production, or smelting, is the source of emissions of two PFCs, tetrafluoromethane (CF4) and hexafluoroethane (C2F6). Both CF4 and C2F6 are very effective at trapping radiation in the atmosphere, with global warming potentials of over 6,500 and 9,200, respectively, over a 100 year time horizon. EPA estimates that PFC emissions from U.S. aluminum smelting totaled roughly five million metric tons of carbon equivalent in 1990.

Partners achieve PFC reductions through a mix of management and technological changes, employing the best options on a smelter-by-smelter basis. These actions reduce the frequency and duration of "anode effects," temporary electro-chemical disruptions in the production process that are the source of PFC emissions. Because anode effects waste energy, actions to reduce them — and thereby reduce PFC emissions — can mean energy savings for VAIP Partners.

GOAL

The VAIP Program's goal is to reduce PFC emissions from U.S. primary aluminum smelting 40 percent by 2000 — equivalent to roughly 2.2 million metric tons of carbon — using cost-effective approaches that make economic and environmental sense for the Partners.

PARTICIPATION

Twelve of the 13 U.S. primary aluminum producers have joined the VAIP as Program Partners. These companies represent 94 percent of the U.S. primary aluminum production capacity. They also represent the full range of primary aluminum smelting technologies and practices, and therefore have different capacities to reduce PFC emissions. The VAIP Program is designed to reflect the diversity within the primary aluminum industry as well as differences between this and other industries. As a result, the VAIP agreement is flexible, allowing each partner to tailor the Program to reflect their particular mix of technology, management structure, and operation practices.

BENEFITS OF PARTICIPATION

VAIP Partners benefit from joining the Program in several ways. First, actions taken to reduce PFC emissions can mean energy savings for VAIP Partners, as well as reductions in non-PFC emissions. Second, EPA provides VAIP Partners with recognition for taking the initiative to prevent atmospheric pollution. In addition, the VAIP brings together experts from industry, government, and academia to answer fundamental questions about the processes that lead to PFC emissions, the best way to measure these emissions, and how to most cost-effectively reduce them. As a result, EPA is funding anode effect research at the Massachusetts Institute of Technology (MIT) and gas standards development at the National Institute of Standards and Technology (NIST), as well as conducting measurements at many U.S. smelters.

For more information, contact Eric Jay Dolin, PhD. At 202/564-9044.

24. WASTE MINIMIZATION NATIONAL PLAN

HISTORY

In 1994, EPA released the Waste Minimization National Plan which focuses on reducing generation of the most persistent, bioaccumulative, and toxic chemicals in hazardous wastes. In keeping with national pollution prevention policy articulated in the Resource Conservation and Recovery Act and the Pollution Prevention Act, the National Plan seeks to reduce the volume and toxicity of hazardous waste, and states a preference for source reduction, followed by recycling as the preferred methods for managing waste, above treatment and disposal.

GOALS

The National Plan has three goals:

- to reduce, as a nation, the presence of the most persistent, bioaccumulative, and toxic chemicals in hazardous wastes 25% by the year 2000 and 50% by the year 2005, using a 1991 baseline;
- to avoid transferring these chemicals across environmental media; and
- to ensure that these chemicals are reduced at their source whenever possible, or, when not possible, that they are recycled in an environmentally sound manner.

PARTICIPANTS

Anyone generating or managing hazardous waste can seek technical assistance and other information from EPA, state environmental agencies, and technical assistance centers to help them minimize hazardous waste, especially those containing persistent, bioaccumulative, and toxic chemicals.

MEASURING PROGRESS

EPA will measure national progress by identifying the most persistent, bioaccumulative, and toxic chemicals in hazardous waste and tracking their reductions using nationally available data. Individual generators have flexibility to establish their own facility goals and baseline years.

BENEFITS

Waste Minimization can result in significant cost savings and reduced regulatory requirements for many waste generators. In addition, reducing the most persistent, bioaccumulative and toxic chemicals in hazardous waste can reduce potential risks inherent in waste management.

AVAILABLE RESOURCES

EPA has developed a draft Waste Minimization Prioritization Tool, a Windows-based software program that provides a screening-level assessment of hundreds of chemicals based on their persistence, bioaccumulation potential, and human and ecological toxicity. The software allows users to import chemical quantity data to generate customized rankings. It also provides information on which chemicals are likely to be present in RCRA hazardous wastes, as well as various regulatory and non-regulatory lists containing these chemicals.

EPA is currently developing a National Measurement List of persistent, bioaccumulative, and toxic chemicals, which will be used to track national waste minimization progress. EPA is also developing waste minimization measurement methodologies.

EPA also has available several waste minimization case studies; waste minimization opportunity documents for metal plating operations and for the petroleum refining industry; training modules for identifying waste minimization opportunities during permitting, inspections, and enforcement discussions; and waste minimization contacts at the regional, state, and local level.

For more information visit our website at http://www.epa.gov\wastemin or the RCRA/Superfund/ EPRCRA hotline at (800) 424-9346.

25. WATER ALLIANCES FOR VOLUNTARY EFFICIENCY (WAVE)

HISTORY

For years, organizations have faced a steady stream of water-management challenges, from growing demand and uncertain supplies to rising costs and inefficient or outdated equipment. EPA introduced the Water Alliances for Voluntary Efficiency (WAVE) program in December 1992 to help the lodging industry find practical, profitable solutions to managing water use.

The WAVE program is part of EPA's long-term goal to reduce demands on the nation's water and energy infrastructure, and to ensure that adequate water resources remain available for future generations. In support of this goal, EPA has decided to redouble its efforts in the lodging sector and expand the WAVE program to three new business sectors: office buildings, schools, and colleges and universities. Over the next several years, EPA hopes to increase name recognition and membership in the WAVE program by targeting these four business sectors.

GOALS

WAVE's mission is to encourage public and private organizations to reduce water consumption while increasing efficiency, profitability, and competitiveness. WAVE strives to benefit its members by:

- Reducing water and energy consumption through the installation of water-efficient equipment;
- Linking water-use efficiency to reduced operating costs;
- Enhancing their public image; and
- Educating their staff, employees, and customers about the benefits of water efficiency.

With the future cost and availability of water presently unclear, and environmental consumerism on the rise, one thing is certain: organizations with established water-efficiency programs will enjoy greater financial and strategic benefits.

RESPONSIBILITIES OF MEMBERSHIP

All businesses, associations, schools, colleges and universities, governments, tribes, and other public or private organizations are eligible to join WAVE. There are two different types of WAVE members: Partners and Supporters. Partners demonstrate environmental leadership by surveying their facilities and installing water-efficiency technologies wherever profitable, and designing new buildings to be water-efficient. Supporters make the same commitment to be water efficient, and also agree to promote WAVE and the concept of water efficiency to others, as well as educate other about available water-efficiency technologies.

To join WAVE, members complete a simple one-page agreement in which they commit to specific membership objectives. Members report their progress toward these objectives to EPA on an annual basis.

BENEFITS OF MEMBERSHIP

By combining high-efficiency upgrades with water-awareness initiatives, WAVE members can reduce water and sewer expenses by as much as 30 percent. Significant savings in chemical, energy, and maintenance costs are also possible. The typical payback period is less than three years.

EPA is committed to helping all WAVE members develop and implement their WAVE initiatives, as well as promote their water-efficiency programs to employees, customers, and the public. EPA provides a full range of marketing, technical, and public-recognition support services, including:

Free Software. Each WAVE member receives WAVE.Saver, a Windows-based software package customized for his/her business sector. The software enables members to survey and track water use with ease and accuracy. It comes complete with full-motion video demonstrations, color photos and graphics, and online tutorials. The program allows facility engineers and managers to identify and evaluate water-efficiency options, calculate costs and project savings, and track the results of activities implemented.

Technical Support. Technical assistance is available through regional WAVE workshops and other events. WAVE can also members to help sources of water efficiency information.

Outreach Materials and Use of the Logo. WAVE provides members with WAVE promotional materials, such as brochures, flyers, and fact sheets. Members are also eligible to use the WAVE logo, with some restrictions, for promotional purposes.

Industry-Wide and National Publicity. WAVE places articles and PSAs in trade journals and national publications. The program also issues periodic press releases and takes every opportunity to promote the WAVE concept and member achievement.

For more information, contact at John Flowers at 202/260-7288 or fax at 202/260-1827.

26. WASTEWI$E PROGRAM

HISTORY

WasteWi$e was conceived in the fall of 1992 by the Office of Solid Waste and Emergency Response. EPA's response showed that reducing materials used and solid waste generated could save organizations money on purchasing, mailing, disposal, labor, and transportation costs. This idea prompted a discussion between EPA and an ad hoc group of business representatives to decide how to structure a voluntary solid waste reduction program. Through consultation with businesses and others, EPA designed a flexible program which allows organizations to set their own waste reduction goals based on their circumstances.

WasteWi$e was launched January 1, 1994, with a letter from EPA Administrator to the Fortune 500 industrial and services companies. The program extended this same invitation to state, local, and tribal governments in 1997. Current membership exceeds 680 organizations, representing over 50 industry sectors.

GOALS

Through reducing municipal solid waste, energy and natural resources are conserved, and pollution is prevented. WasteWi$e partners reduce municipal solid waste in three ways:

- Waste prevention
- Collecting Recyclables
- Increasing the manufacture or purchase of recycled products

RESPONSIBILITIES OF MEMBERSHIP

Any organization may join the WasteWi$e program. Trade associations and other membership organizations may join as Endorsers to promote the program to their members.

EPA asks that all partners set goals, including three waste prevention actions, one action to establish or improve a recycling program, and one action to increase the purchase or manufacture of recycled products. During a three-year period, they work to achieve these goals, reporting progress on a yearly basis. The annual reporting form asks organizations to describe what they accomplished in the previous calendar year. Partners provide the following:

- Amount of waste prevented
- Amount of recyclables collected
- Description of buy-recycled activities and example purchases.

At the end of the three-year period, partners may exit the program or recommit as senior partners.

BENEFITS OF MEMBERSHIP

Cost savings. Organizations have saved million of dollars through their WasteWi$e activities. In 1996, BellSouth Telecommunications, Inc. Reduced nearly 30 million pounds of paper and saved over $16 million by reducing paper printouts through increased use of an electronic filing system.McDonald's Corp. Saved $3,000,000 by reducing the size of the napkins by one inch, This activity resulted in a total savings of more than 12,000,000 pounds. Continued packaging reduction efforts saved The Clorox Company an estimated

$1.5 million in 1996. Technical Assistance. EPA facilities technical assistance for partner organizations through a toll-free helpline, a quarterly document entitled WasteWi$e Update, a bi-monthly newsletter entitled WasteWi$e Bulletin, tip sheets, and networking sessions that allow partners to get together with others in their region to discuss pertinent waste reduction issues. WasteWi$e also offers partners a variety of online resources, including the newly revised homepage and the WasteWi$e partner listserver. WasteWi$e plans to offer the option of online reporting to partners in the coming year.

Recognition. EPA provides recognition for outstanding achievements and publicize program successes through newsletters, press releases, and public service announcements. Partners may use the WasteWi$e logo in their own promotion and advertising. WasteWi$e plans to launch an awards program in January, 1998, to recognize outstanding partners in the areas of Waste Prevention, Recycling, and Buying Recycled. Award recipients will be recognized at a WasteWi$e National Forum which will be held in the Fall of 1998.

For more information, contact WasteWi$e at (800) EPA-WiSE (372-9473) or visit our website at http://www.epa.gov/wastewise.

E. EPA REGIONAL OFFICES VOLUNTARY PROGRAMS

EPA REGION 1
CENTER FOR ENVIRONMENTAL INDUSTRY AND TECHNOLOGY (CEIT)

In New England, the environmental industry not only supplies innovative solutions to tough problems, but it also accounts for over $10 billion of the Gross Regional Product and more than 150,000 jobs. Consistent with the efforts throughout the Clinton Administration to work more closely with the technology community, EPA Region I has an ambitious program underway to promote this important industry and to help new, cost-effective technologies find their way into the market.

EPA Region I has opened the Center for Environmental Industry and Technology (CEIT) at its Boston Office, which takes a five-faceted approach to addressing the needs of the environmental industry in New England:

- improving access to state and federal programs;
- offering technology demonstration and evaluation opportunities;
- expanding access to capital;
- bringing down regulatory and institutional barriers; and
- marketing environmental products and innovative technologies both here and abroad.

EPA Region I is achieving these goals through a variety of approaches. Since 1995, CEIT has directed $4.9 million into innovative technologies through funding of about 20 projects in New England. The Massachusetts Department of Environmental Protection now has an Innovative Technologies Coordinator thanks to funds from CEIT. CEIT hosts six "Golden Opportunities" seminars for the New England business community each year on topics ranging from technology transfer to financing to international export opportunities. CEIT's Environmental Venture Capital Forum brings together environmental technology developers, investors and regulatory experts to hear from pre-screened companies seeking funding for cutting edge environmental services and technologies.

CEIT works in cooperation with state trade agencies to market New England's environmental products in the United States and abroad. CEIT and the six New England states have undertaken a cooperative effort to promote innovative environmental technologies. The group has already begun a project which will streamline permitting processes and allow new septic system technology to get to the market and into the field more quickly. An ombudsman hotline is open to answer questions from the business community.

For more information, call CEIT at (800) 575-CEIT) or check out or World Wide Website at http://www.epa.gov/region01.

NEW ENGLAND OFFICE VOLUNTARY POLLUTION PREVENTION PARTNERSHIPS EFFORTS

EPA's New England Office provides a diverse array of voluntary and partnership programs for the New England regulated community. These programs are administered by cross-media teams of scientific, engineering, technical, and legal staff who focus on specific industrial sectors, sensitive ecosystems and other priority areas. We participate in many national voluntary programs including Common Sense Initiative, Design for the Environmental, Environmental Leadership Program, Green Lights/Energy Star, Project XL, and WasteWi$e. The programs which are unique to our region are described in detail below.

In order to promote all of these programs in a comprehensive format, we have recently launched a regional "Getting the Green Back" campaign which aims to bring together New England assistance and recognition programs under one umbrella. The goal of the "Getting the Green Back" campaign is to provide a consistent message to businesses in New England by using a promotional package that describes all of our voluntary programs and also includes success stories about companies that have implemented these programs. The campaign was designed to clearly convey the message that pollution prevention is the best way to achieve environmental compliance, as well as to provide the incentive and opportunity to participate in our programs.

Our voluntary pollution prevention partnerships are presented in the following categories:

Compliance and Technical Assistance

Compliance Leadership Through Environmental Auditing and Negotiation (CLEAN)
CLEAN offers small and medium sized businesses free, on-site compliance and pollution prevention audits, as well as limited enforcement discretion consistent with EPA's Small Business Compliance Assistance Policy for violations discovered during the process, in exchange for an agreement to correct violations and under a "beyond compliance" pollution prevention project. EPA's New England Office has awarded $300,000 in grants to non-governmental organizations to establish multi-disciplinary technical assistance teams that will conduct in-depth pollution prevention assessments for metal finishing companies in Maine, New Hampshire, and Rhode Island, as well as printers and wood product coaters in Maine.
For more information, contact: Jean Holbrook, phone #: 617/565-9048.
E-mail: holbrook.jean@epamail.epa.gov.

New England Environmental Assistance Team (NEEATeam)
The NEEATeam provides an accessible, flexible assistance presence, so businesses can get straight answers to tough questions. Taking a sector-specific approach, the NEEATeam supplies in-depth background information and assistance to the following sectors: printing, metal finishing, wood products coating, auto repair and refinishing, municipalities, and technical, trade, and vocational schools. With a special focus on small businesses, the team has provided:

- training workshops on pollution prevention and emerging technologies;
- round table discussions to raise and resolve issues; and written resources, such as
- compliance manuals and a guide to financing pollution prevention projects.

For more information, contact: Anne Leiby, phone#: 617/565-4974, E-mail: leiby.anne@epamail.epa.gov or Sally Mansur, phone #: 617/565-1378, E-mail: mansur.sally@epamail.epa.gov.

Green Technologies

Center for Environmental Industry and Technology (CEIT)
CEIT allows EPA's New England Office to promote the technology community and to help new, cost-effective technologies find their way into the marketplace. CEIT addresses the needs of the New England environmental industry by:

- improving access to state and federal programs;
- offering technology demonstration and evaluation opportunities;
- expanding access to capital;
- bringing down regulatory and institutional barriers; and
- marketing environmental products and innovative technologies both here and abroad.

EPA is achieving these goals through a variety of approaches. Since 1995, CEIT has directed $4.9 million into innovative technologies by funding approximately 20 projects. CEIT also hosts a "Golden Opportunities" CEIT's Environmental Venture Capital Forum brings together environmental technology developers, investors, and regulatory experts to hear from pre-screened companies seeking funding for cutting-edge environmental services and technologies. In 1996, CEIT added a series of Technology Fairs that brings together members of the regulated community to learn about important new regulations facing their industries. ***For more information, contact: Jim Cabot, phone #: 617/565-4899, E-mail: cabot.jim@epamail.epa.gov.***

Compliance and Environmental Management Systems

StarTrack
In the StarTrack program, companies voluntarily agree to assess their environmental management system (EMS) and compliance performance, and to have this performance certified by a third party in a public report. In return, EPA offers limited enforcement discretion consistent with the EPA Audit Polity, respect inspections, and expedited permitting. Like ISO 14000, StarTrack encourages businesses to scrutinize their environmental compliance and management system, set goals, and establish plans for improving performance. The program strives to build on a company's environmental management system, focusing on "beyond compliance" environmental performance. Companies who are making efforts to meet the ISO 1400 standards are in a great position to participate in StarTrack.
Contact: David Guest, phone #, (617) 565-3348, E-mail: guest.david@epamail.epa.gov

Recognition

Partners for Change
Our Partners for Change program recognizes New England businesses for implementing responsible environmental practices. The program offers businesses a free environmental "pocketbook," which has

ideas on everything from recycling and energy efficiency to waste reduction. EPA recognizes participating companies by putting them in the Partners to Partners Directory and highlighting them in our EPA press releases. We also provide participants with a window decal and certificate, as well as their own marketing materials to inform their customers, colleagues, and insurers that they are Partners for Change. ***For more information, contact Chris Jendras at 617/565-3283, E-mail: jendras.chris@epamail.epa.gov.***

Environmental Merit Awards

Every year at a special Earth Day ceremony, EPA's New England Office presents a merit award to businesses that have had an outstanding environmental record during the previous year. Any business that has promoted and implemented an innovative idea or technology, which can be shared with others and/or will have positive long-term environmental effects, is eligible. Winners are mentioned in EPA press releases and receives a certificate of recognition. ***For more information, contact Michael Ochs at 617/565-3297, E-mail: ochs.michael@epamail.epa.gov.***

Small Business Assistance

Small Business Ombudsman

EPA's New England Office recognizes that the small businesses that fuel the region's economy often have a difficult time understanding and meeting environmental requirements while staying in the black. We have appointed an ombudsman to help small businesses make sense of environmental requirements and find assistance to improve their environmental performance. ***For more information, contact Dwight Peavey at 617/565-3230, E-mail: peavy.dwight@epamail.epa.gov.***

CLEAN POLLUTION PREVENTION PILOT PROJECT

CLEANer, Cheaper, Smarter Goals
The CLEAN Pollution Prevention (P2) project is based on EPA's ***Common Sense Initiative*** and the belief that preventing pollution and exceeding regulatory compliance can be accomplished in cleaner, cheaper and smarter ways.

CLEAN Objectives
Combine P2 technical assistance and enforcement amnesty as incentives for improved environmental performance by small-and medium-sized businesses in the metal finishing, printing, and wood products industries;

- Achieve measurable environmental results and increased compliance;
- Conducts no-cost CLEAN assessments at approximately 60 facilities in Maine, New Hampshire and Rhode Island.

Description of Project
CLEAN offers small-and medium-sized businesses free, on-site compliance and P2 audits — and enforcement amnesty for any violations discovered in the process — in exchange for an agreement to correct violations and undertake a "beyond compliance" pollution prevention project.

EPA Region I awarded $300,000 in grants funds to non-government organizations to implement CLEAN in partnership with State regulatory and P2 programs. The University of New Hampshire, the Maine Center for Technology Transfer/Maine Metal Products Association, and the Narragansett Bay Commission have established multi-disciplinary technical assistance teams to conduct in-depth P2 assessments at metal finishing companies in Maine, New Hampshire, and Rhode Island. Grantees solicited volunteers from industry, government technical assistance and regulatory programs, universities and other organizations to serve on the assessment teams and various policy committees.

In addition, the Maine Department of Environmental Protection, in partnership with the Printing Industries of New England and the Maine Wood Products Association, offers a CLEAN program for Maine's printing and wood product industries.

CLEAN Contacts: EPA Region I: Austine Frawley at 617/565-3231 or E-mail: frawley.austine@epamail.epa.gov. Or ***Maine DEP Innovation & Assistance Office:*** Ann Pistell at 207/287-2881. ***Maine Metal Products Association:*** Stan Eller at 207/871-8254; or Tim Washburn at 207/368-5969. ***Narragansett Bay Commission:*** Jim McCaughey at 401/277-6680. ***Printing Industries of New England:*** Stig Bolgen at 508/655-8700. ***University of New Hampshire:*** Dr. Ihab Farag at 603/862-2313.

ENVIRONMENTAL LEADERSHIP PROGRAM - NEW ENGLAND

EPA Region I established the Environmental Leadership Program - New England (ELP-NE) to develop, demonstrate and test innovative and comprehensive approaches to increase environmental compliance and pollution prevention. ELP-NE provides an opportunity for organizations with demonstrated leadership to investigate alternative strategies to produce environmental performance..

GOALS

- Provide an arena to explore, test, and share with others new tools to increase environ mental performance;
- Recognize those organizations which have demonstrated environmental leadership;
- Explore ways to encourage other organizations to adopt successful environmental management systems (EMSs), auditing programs, and pollution prevention practices.

PROCESS

EPA Region I, in partnership with states (and state entities), will recognize and work with selected organizations that reflect high-level management commitment to prevention-oriented environmental management that goes beyond compliance with regulations.

HOW TO APPLY TO PARTICIPATE

EPA Region I, in consultation with the states, selects each participant in ELP-New England based upon review of an application which demonstrates the organization's strong commitment to compliance; integration of an environmental ethic into its management, policy and activities; a firm commitment to pollution prevention; demonstrated employee and community involvement; environmental beyond the requirements of the law.

In addition, applicants must propose a one-year project to test innovative approaches to going beyond compliance, including: advancing the design of environmental management systems; third- party certification of an organization's environmental performance; development of mentoring programs; and community involvement to set environmental goals and enhance accountability to the public.

BENEFITS

ELP-New England participants receive public recognition and facilitated access to EPA assistance programs such as Green Lights, ClimateWise, WasteWi$e and more. Additional benefits may include reduced inspections, enforcement discretion, expedited permitting, streamlined monitoring and reporting requirements and facility-specific benefits.

For more information, contact Gina Snyder, ELP-New England Team Coordinator at (617) 565-9452 or E-mail: snyder.gina@epamail.epa.gov

CURRENT/FUTURE PLANS

After the pilot year, the ELP-New England merged fully with the National Environmental Leadership Program. Much Work has been done to identify the factors that demonstrate leadership by regulated businesses and those criteria will be announced in a Federal Register Notice in Fiscal Year 1998.

For more world wide website URL: http://es.epa.gov/elp
Gina Snyder, ELP-New England Team Coordinator at (617) 565-9452, E-mail: snyder.gina@epamail.epa.gov

THE NEW ENGLAND ENVIRONMENTAL ASSISTANCE TEAM

The New England Environmental Assistance Team (NEEAT) was established in 1995 to help the regulated community:

- Understand how to comply with environmental laws, and do so;
- Understand the benefits of pollution prevention and practice; and
- Become better environmental citizens while thriving economically.

The aim of the NEEATeam is to complement EPA's traditional command-and-control role with a more accessible, flexible assistance presence and to listen and address the regulated community's questions and concerns.

Based on input from industry, government, consultants and other experts, the NEEATeam is working with the following sectors: printing, metal finishing, auto body and auto repair, wood coaters, schools (vocational and technical) and municipalities. The first two sectors are also the focus of the EPA's national Common Sense Initiative, in which EPA Region I participates . With in each sector, the NEEATeam will focus on smaller facilities. The team provides the following services:

- A confidential toll-free assistance hotline ***(1-800-90NEEAT)*** to provide the regulated community with one-stop shopping for answers to their compliance and pollution prevention questions;

- ***Partners for Change,*** a program to recognize facilities and organizations that demonstrate environmental stewardship, and;

- A free quarterly bulletin, "P2 and the Bottom Line", providing information on environmental compliance and pollution prevention.

The NEEATeam begins work with each sector by sponsoring a series of focus group meetings to find out what activities the team should undertake. Past, current and planned activities include:

- Events such as workshops, roundtables, and training on compliance issues, pollution prevention, and emerging technology;

- Outreach materials such as compliance and P2 manuals, fact sheets and videos, and;

- Laboratory, model facility and open house demonstrations of compliance techniques and technologies.

For more information, contact Sally Mansur at 617/565-1378 or E-mail:mansur.sally@epamail.epa.gov or Anne Lieby at 617/565-4974 or E-mail: leiby.anne@epamail.epa.gov.

STARTRACK FACT SHEET BETTER ENVIRONMENTAL PERFORMANCE THROUGH ENVIRONMENTAL MANAGEMENT SYSTEMS AND THIRD PARTY CERTIFICATION

GOAL

To expand the use of environmental compliance systems and management systems to improve protection of the environment, to improve public understanding of a company's environmental performance, and to improve the efficiency of the use of public and private resources.

CONCEPT

A company agrees to:

- Audit its environmental management and compliance performance each year, and
- Prepare and public a comprehensive environmental performance report annually and
- Triennially have its audit results reviewed and certified by an independent third party.

BENEFITS

- Recognition for Participation and Completion of Program Requirements
- Partnerships with EPA, State and Other Regulatory Agencies
- Modified Inspection Priority
- Correction Period and Limited Penalty Amnesty for Violations

REQUIREMENTS

- ***Comprehensive Compliance Audit:*** The Company will conduct a comprehensive audit of all aspects of compliance with Federal, State and Local environmental regulations in accordance with StarTrack audit protocol, identifying all areas of non-compliance and resulting in a Corrective Action Plan including a Schedule addressing required corrections and preventative actions.

- ***Environmental Management Systems Audit:*** The Company will conduct an audit to assess its overall environmental management system in accordance with StarTrack EMS audit protocol (based on ISO 14000), identify potential areas for improvement, and develop a prioritized Implementation Plan for addressing those areas.

- ***Independent Third Party Review of Audits and Audit Findings by Qualified Auditors:*** The Company will retain a qualified, independent third party to review audits. The third party certification provides an accurate and credible independent assessment of the Company's compliance status and system effectiveness status as well as recommendations for improvement in compliance and environmental management and pollution prevention.

- ***Environmental Performance Report:*** The Company will prepare a publicly available environmental performance report documenting the Company's efforts, providing a record and a communication tool for interface with the public, employees and regulators regarding the Company's environmental programs and performance.

To participate, a company must have an established compliance auditing program, and a demonstrated commitment to compliance, pollution prevention, and continuous improvement of environmental performance.

For more information, contact David W. Guest, Esq. at 617/565-3348;
E-mail: guest.david@epamail.epa.gov
For more information, contact Marge Miranda at 617/565-1002;
E-mail: miranda.marge@epamail.epa.gov

SOLID WASTE PROGRAM

Background

People in the United States generate 4.4 pounds of solid waste per person per day. Although the amount of solid waste generated each year has been increasing since 1960, the rate of growth recently has slowed as a result of source reduction, reuse, recycling, and composting. EPA has created a hierarchy for integrated solid waste management: source reduction, reuse, and recycling (including composting) followed by incineration and landfilling. EPA's national solid waste goal is to recycle 35% of the waste stream by the year 2005. EPA Region I's solid waste team focuses its work on source reduction, reuse, recycling programs, aiming to exceed this goal in New England.

Program Priorities

- Market development of recyclables;
- Promoting source reduction and reuse;
- Providing technical assistance and disseminating information;
- Creating and supporting governmental and tribal infrastructures to promote integrated solid waste management, and;
- Promoting procurement of recycled commodities.

Solid Waste Grants

EPA Region I provides funds to State government and non-profit organizations to work on projects consistent with the solid waste program priorities. In 1996, Region I awarded over $800,000 in grants. Examples of grant programs include:

Jobs Through Recycling: The goals of this initiative is to create jobs and divert solid waste from disposal by developing markets for recyclables. EPA has awarded grants to each of the six New England states as well as the Northeast Recycling Council (a 10-state coalition). Recycling accounts for over 103,000 jobs and $7.2 billion of value added to the Northeast economy.

WasteWi$e: This is a national voluntary program which encourages businesses to reduce and recycle their wastes. Under this program, EPA supports WasteCap programs in Maine, New Hampshire and Massachusetts. WasteCap is a program in which businesses help each other determine opportunities and methods to reduce and recycle solid waste.

Research Library for Resource Conservation and Recovery Act (RCRA)

The Library provides information, technical assistance, research and answers to solid waste questions. The Library also maintains a database of grants and loans available for non-hazardous waste management, recycling, source reduction, reuse and solid waste education projects.

Global Warming Background

On June 26, 1997, John DeVillars, Region I Administrator announced a plan to reduce green house gases in New England. The priorities for the plan are:

- ***Federal Government***
  - clean power
  - emissions inventors
  - action plan for mitigation
- ***Education***
  - website directory
  - clearinghouse of New England impacts
- ***State collaboration***
  - emissions inventories
  - State mitigation plans
- ***Business voluntary programs***
  - Green Lights
  - Energy Star
  - WasteWi$e
  - Source reduction/recycling

Contacts:
Cynthia Greene, Team Leader at 617/565-3165 or E-mail: greene.cynthia@epamail.epa.gov
Norm Willard, Esq. For Climate Change at 617/565-3702 or E-mail: willard.norm@epamail.epa.gov
Research Library for RCRA (Fred Friedman, Librarian) at 617/565-3282 or E-mail: friedman.fred@epamail.epa.gov

PROJECT XL

Project Excellence and Leadership

Summary: Project XL encourages real world tests of innovative strategies that achieve cleaner and cheaper environmental results than conventional regulatory approaches. Under the program, EPA grants regulatory flexibility in exchange for an enforceable commitment by a regulated entity to achieve better environmental results than would have been attained through full compliance with current regulations. EPA has set a goal of implementing fifty pilot projects nationwide in our four categories:

- XL projects for facilities
- XL projects for sectors
- XL projects for communities
- XL projects for government agencies

Project Selection: Using a simple and flexible application process, EPA will accept and review projects on a rolling basis. Once a project is selected, EPA's goal is to move to implementation within six months. Proposals will be short, approximately 10 pages in length, and must address the following eight criteria:

- Environmental Results
- Cost Savings and Paperwork Reduction
- Stakeholder Support
- Innovative/Multi-Media Pollution Prevention
- Transferability to other Industries or Facilities
- Technical, Administrative, and Monetary Feasibility
- Monitoring, Reporting, and Evaluation Techniques
- Shifting of the Risk Burden that must ensure worker safety and be consistent with environmental justice concerns

Project Implementation: EPA is taking a decentralized or "franchising" approach to be implementation of XL projects. Individual projects should be managed by the units of government that are best suited to address the issues raised by the project. EPA will not move forward with projects unless state and tribal regulatory agencies are full partners. Proposals developed with local governments, environmental groups, and citizens organizations will be viewed favorably.

For more information, contact Anne Kelly, Project Coordinator at 617/565-3426 or E-mail: kelly.anne@epamail.epa.gov.

EPA REGION 2
NEW YORK VOLUNTARY PARTNERSHIP PROGRAMS

Region II Voluntary Partnership Program Profile: EPA's New York City Office provides an array of voluntary and partnership programs serving New York, New Jersey, the U.S. Virgin Islands and Puerto Rico. These programs are administered by individuals and teams who focus on assisting state and local partners, industrial sectors and other priority areas. We participate in many national voluntary programs including Climate Wise, Green Lights, ENERGY STAR Building, Landfill Methane Outreach Program, Pollution Prevention, Water Alliance for Voluntary Efficiency (WAVE), Waste Minimization Program, Pesticide Environmental Stewardship Program, Indoor Environments and WasteWi$e. The programs contacts and activities unique to Region II are described in detail below.

- Green Lights/ENERGY STAR including Buildings
- Climate Change
- Water Alliance for Voluntary Efficiency (WAVE)
- Pollution Prevention Program

Region II has historically emphasized participation in voluntary programs related to energy efficiency. The Region has a successfully recruited electric utilities into the Green Lights and ENERGY STAR Buildings Program. All New Jersey Electric Utilities are in the program and four of eight New York State Electric Utilities are in the program. In addition the Puerto Rico Electric Power Authority and Virgin Islands Water and Power Authority are in the program.

Region II has since 1995 been using Green Lights Participation as a base to successfully launch with OPPE the New Jersey Climate Wise Partnership. This partnership which is under the umbrella of the Climate Wise Program now has 18 companies. It was formed with initial sponsorship by AT&T now Lucent Technologies, Public Service Electric and Gas Company and Johnson & Johnson. Quarterly technical meetings are held on best practices or technology to make industrial companies more energy efficient and climate friendly.

For more information, contact Ed Linky at 212/637-3764; E-mail: linky.ed@epamail.epa.gov.

WasteWi$e: *contact Lorraine Graves at 212/637-4099; E-mail: graves.lorraine@epamail.epa.gov.*
Waste Minimization National Plan: *contact John Gorman at 212/637-4008;*
E-mail: gorman.john@epamail.epa.gov.

Pesticide Environmental Stewardship Program: *contact Fred Kozac at 732/321-6769;*
E-mail: kozac.fred@epamail.epa.gov.

Indoor Environments Program: *contact Paul Giardina at 212/637-4010;*
E-mail: giardina.paul@epamail.epa.gov and

Landfill Methane Outreach Program: *contact Ed Linky at 212/637-3764;*
E-mail: linky.ed@epamail.epa.gov.

EPA REGION 3
VOLUNTARY POLLUTION PREVENTION PARTNERSHIP EFFORTS

EPA Region III administers a wide variety of national and region-specific voluntary pollution prevention programs. Region III focuses on Green Lights and Energy Star Programs, Environmental Leadership Program, Common Sense Initiative, Project XL, Waste Minimization National Plan, and other national voluntary programs. Region III-specific endeavors include the Business Assistance Center, Brownfields Initiative, Businesses for the Bay (Chesapeake Bay Program), Green Communities, Voluntary Initiative for Pollution Prevention (VIP2), and the Chemical Safety Audit Program.

Region III has created an internal cross-functional team to plan and implement the strategy for handling the voluntary programs. This team is called the Pollution Prevention Partnership Program (P4) Team. Consisting of the Region III project leads for the various national and Region III programs and associated senior managers, this Team has the following goal:

"To prevent or reduce pollution prevention through the creation of cooperative partner ships designed to achieve beneficial environmental objectives."

Regional accomplishments that are common to the national programs have been aggregated with data from all EPA regions and are presented elsewhere in this document. Brief descriptions and successes of Region III voluntary programs are presented as follows:

Business Assistance Center
The Region III office assists small and medium sized businesses to comply with environmental regulations in order to protect the environment while sustaining economic development. The Center also promotes and supports waste minimization efforts and Region III's environmental technology industry. Many regional businesses and trade associations have utilized this Center which has often served as a conduit for helping to form pollution prevention partnerships. ***For more information, contact Richard Daly at 800-228-8711; E-mail: daly.richard@epamail.epa.gov.***

Brownfields Initiative
The mission of the Region III Brownfields Initiative is to empower communities through education and the creation of public/private partnerships. This mission is focused on reclaiming abandoned industrial sites in manners that are protective of human health and the environment. Region III encourages economic redeveloping through environmental cleanups. In Region III, the cities of Baltimore, Maryland; Phoenixville, Pennsylvania; Richmond, Virginia; Wilmington, Delaware; Bucks County, Pennsylvania; and Cape Charles - Northampton County, Virginia were awarded national pilots under the new Brownfields Economic Redevelopment Initiative. The cities of Philadelphia, Pittsburgh, Pennsylvania, and Baltimore County, Maryland, were awarded regional pilots by the Region III office. ***For more information, contact Tom Stolle at 215/566-3129;***
E-mail: stolle.tom@epamail.epa.gov.

Businesses for the Bay (Chesapeake Bay Program)
Businesses for the Bay is the Chesapeake Bay Program's voluntary pollution prevention program crafted in cooperation with businesses to reduce chemical releases to the Chesapeake Bay. In October 1996,

Businesses for the Bay was officially launched by the Chesapeake Executive Council (comprising of the governors of Maryland, Virginia, and Pennsylvania; the mayor of the District of Columbia; the chair of the Chesapeake Bay Commission; and the U.S. EPA Administrator). Businesses for the Bay has the following goals: 1) by the year 2000, participation of 75% of watershed businesses in implementing pollution prevention; 2) by the year 2000, 65% reduction of Toxics Release Inventory chemicals and a 75% reduction in Chesapeake Bay Toxics of Concern List Chemicals (using a 1988 baseline); 3) increasing the number of small businesses participating in pollution prevention; and 4) increasing the number of mentors available to provide pollution prevention assistance to other businesses. Participants are asked to annually report the progress made toward their pollution prevention goals. Data is not yet available for this new program. ***For more information, contact Kelly Mecum at 410/267-5719; E-mail: mecum.kelly@epamail.epa.gov.***

Green Communities

Region III has developed the Green Communities Assistance Kit available through the Internet at www.epa.gov/region3/greenkit. The Assistance Kit is designed to guide communities as they plan for their future. The kit is structured around four questions and an action statement. The questions are: Where Are We Now?, Where Are We Going?, Where Do We Want To Be?, and How Do We Get There? It is applicable to a wide variety of planning scenarios and communities. The overriding goal of the Tool Kit is to offer a community a framework for planning for a sustainable future — a future that will protect the environmental and human health and will promote the economic and social well-being of the community. ***For more information, contact Susan McDowell at 215/566-2739; E-mail: mcdowell.susan@epamail.epa.gov.***

Chemical Safety Audit Program

This Program is designed to improve accident prevention and reduce the number and consequences of accidental chemical releases through the use of voluntary facility-audits. These audits are conducted at either the chemical manufacturer or the end-user's facilities. During 1996, approximately 106 audits/mini-audits were performed. ***For more information, contact Bill McHale at 215/566-3310; E-mail:mchale.bill@epamail.epa.gov.***

Voluntary Initiative for Pollution Prevention (VIP2)

This voluntary program encourages companies in Southwestern Pennsylvania to commit to pollution prevention, exchange P2 strategies, and to partner with environmental and regulatory sectors. VIP2 is managed through a steering committee consisting of environmental, industrial and regulatory representatives. During 1996, 10 companies voluntarily chose to participate in VIP2 by stating their commitment to pollution prevention and by selecting one or more pollutants for specific reduction efforts. ***For more information, contact Ray George at 304/234-0234; E-mail: george.ray@epamail.epa.gov.***

EPA REGION 4
VOLUNTARY P2 PARTNERSHIP EFFORTS

The region is participating in numerous national and region-specific voluntary P2 programs. We focus in particular on Project XL (two signed agreements), Green Lights, Common Sense (Automotive Sector) and the Environmental Leadership Program (one of the national pilots).

The region manages P2 through a team which is headed up by a senior program manager. Team members from each division round out the team. Brief descriptions of some of the region's efforts are presented below.

Life Cycle Management
The life Cycle Management Team is comprised of representatives from industry, government, environmental groups and labor, and its focus is on the use of life cycle analysis as a means of reducing the impact of the manufacture and use of automobiles. Secondarily, it identifies opportunities for pollution prevention in the manufacture of automobiles.

Southern Appalachian Mountains Initiative
This effort is a non-profit organization with a goal of developing a regional strategy for improving the air quality of the Southern Appalachian mountains. This partnership of EPA, States, industry, the National Park Service, Forest Service and numerous environmental groups will rely heavily on voluntary source reduction and other pollution prevention techniques to achieve its goal.

Urban Initiative for Sustainable Communities
This provides participating communities with the technical and educational assistance needed to address specific environmental problems. The objective is to achieve measurable results by developing partnerships with government and private sector entities. Together, strategies are developed leading to improvement in the local environment. An important strategic tool: pollution prevention.

Brown fields Initiative
The purpose of this initiative is to reclaim abandoned industrial or business sites and return them to the public tax base. This is accomplished through public-private partnerships. The region was a pioneer in investing in this important initiative.

Chemical Safety Audits
The region has performed almost one hundred of these audits, which improve accidental prevention measures and reduce spills and accidents in industrial facilities. A detailed report is returned to the facility, with a list of recommendations. Follow up is always a part of the process.

Project XL
The region has two signed agreements which focus on P2 and public involvement to a great extent. In each agreement, many tons of what would normally be released by way of pollutants are eliminated via P2 technologies.

EPA REGION 5
PARTNERSHIPS IN PREVENTING POLLUTION

Region 5 Contacts for National Voluntary Programs and Initiatives

P2 Programs (general)/Regional P2 Coordinator	Phil Kaplan	312/353-4669
Common Sense Initiative	Bob Tolpa	312/886-6706
Design for the Environment (Dfe)	Phil Kaplan	312/353-4669
Green Cleaners	Danielle Green	312/886-7594
Environmental Leadership Program	Jeff Bratko	312/886-6816
	Janet Haff	312/353-7923
Green Lights/ENERGY STAR	Audrie Washington	312/886-0669
Global Climate Change	Julie Magee	312/886-6063
Indoor Environments Program	Jack Barnette	312/886-6175
Landfill Methane Outreach Program	Jeanette Marrero	312/886-6543
Pesticide Environmental Steward Program	David Macarus	312/353-9660
Project XL	Marilou Martin	312/353-9660
ISO 14000	Pankaj Parikh	312/886-6707
Waste Minimization National Plan	Chad Cliburn	312/353-5617
	Janet Haff	312/353-7923
WAVE	Al Krause	312/353-5787
	Charles Pycha	312/886-0259
WasteWi$e	Susan Mooney	312/886-3585

Region 5 Voluntary Initiatives

Beneficial Landscaping *Helen Tsiapas* *312/886-7901*

The mission of the Beneficial Landscaping Program is to prevent pollution and encourage biodiversity and ecological practices through the promotion of native landscaping practices to reduce pesticide usage, energy, and water consumption. U.S. EPA and its partners serve as a clearinghouse and coordinate various interdisciplinary groups that are involved in beneficial landscaping efforts.

Great Chicago Pollution Prevention Alliance *Phil Kaplan* *312/353-4669*

The Greater Chicago Pollution Prevention Program (GCP3) began in 1992 as a cooperative effort among federal, state, and local environmental agencies to promote pollution prevention. GCP3's non-regulatory pollution prevention technical expert provides free assistance to any interested Chicago area business. The Greater Chicago Pollution Prevention Alliance grew from GCP3 partnerships with other organizations actively promoting pollution prevention in Chicago. The Alliance is a voluntary association of businesses, government agencies, citizen and environmental groups, community development organizations, legal firms, academia, and others that are promoting pollution prevention as the preferred strategy for environmental protection and economic growth. In addition, the Alliance is developing approaches to improve and streamline environmental regulatory and assistance activities at the local, state, and federal level.

Great Printers *Phil Kaplan* *312/353-4669*

The Great Printers Project is a partnership led by the Environmental Defense Fund, the Council of Great Lakes Governors, and the Printing Industries of America, with strong support from U.S. EPA. In its fifth year, the project first designed a series of pollution-prevention recommendations for litho graphic printers. Four Great Lakes States (Wisconsin, Illinois, Indiana, and Minnesota) are currently implementing these recommendations through the production of compliance manuals, consolidated reporting systems, and the enrollment of printers in the Project. By creating a dynamic partnership among business, government, and environmental groups, the Projects aims to make pollution prevention standard operating procedures within the Great Lakes lithographic printing industry.

Indoor Air Quality Program *Sheila Batka* *312/886-6053*

The Indoor Air Quality Program seeks to reduce risks from indoor pollutants, which can sometimes be worse than outdoor air. U.S. EPA Region 5 focuses its efforts on children's exposure to indoor air, especially in schools.

PCB Phasedown *Tony Martig* *312/353-2291*

The goal of Region 5's voluntary PCB Phasedown Program is to reduce the environmental risks posed by PCBs by having all utilities, industrial facilities and commercial buildings in Region 5 decommission all of their PCB electrical equipment, such as transformers and capacitors. Under the program, facilities commit to remove their remaining PCB electrical equipment. Region 5 publicly recognizes participation in the program, tracks and reports progress, and as necessary, works to overcome regulatory barriers. So far, utilities enrolled in the program report that they have removed almost 90% of their PCB electrical equipment.

PCB Used Oil Clean Sweep *Sue Brauer* *312/353-6134*

U.S. EPA Region 5 coordinated with the National Oil Recyclers Associations (NORA) to conduct a PCB used oil "clean sweep" pilot. Region 5 is now working with NORA to fully plan the project and bring in other partners to mitigate further PCB contamination of the Great Lakes.

U.S. Auto Project *Phil Kaplan* *312/353-4669*

The U.S. Automobile Pollution Prevention Project, begun in 1991, now includes all U.S. auto- making facilities of GM, Ford, and Chrysler. The project is designed to reduce the use of persistent toxic chemicals through information sharing, the creation of case studies, and the reporting of reductions of TRI emissions. The American Automobile Manufacturing Association facilitates the project, with input from the U.S. Auto Project Advisory Group (which includes representatives from government, business, academia, and public-interest groups).

Waste Minimization Opportunity Assessments *Chad Cliburn* *312/353-5617*
Janet Haff *312/353-7923*

In an effort to promote source reduction and recycling, Region 5 is promoting the Waste Minimization Opportunity Assessment Program. RCRA facilitates which agree to participate in this program take Regional waste minimization staff on a tour of the facility's operations. The EPA staff examine the waste streams, and make recommendations about reductions the facility can make to those waste streams. After a few months, the facility is contacted to see what kind of measurable waste reductions and/or cost savings have been realized and to inquire if any further assistance is requested to EPA staff.

EPA REGION 6
DALLAS - VOLUNTARY PARTNERSHIP PROGRAM EFFORTS

EPA's Dallas Office provides an array of voluntary and partnership programs for the South Central and South West's area's public and private sectors and communities. These programs are administered by individuals and teams of scientific, engineering, technical, and outreach staff who focus on assisting state and local partners, industrial sectors and other priority areas. We participate in many national voluntary programs including Community Based Environmental Protection, Sustainable Development, Project XL, Common Sense Initiative, Waste Minimization Program and WasteWi$e. The programs contacts and activities unique to Region 6 are described in detail below.

1. PARTNERSHIP TO HELP FOUNDRIES ACHIEVE ENVIRONMENT COMPLIANCE

PROBLEM

Based on inspections of foundries in Region 6, it appeared that a large portion of the industry was out of compliance. The initial inspection and enforcement components of the initiative established a baseline and sensitized the industry to common compliance issues. Most of the foundries in the region are small businesses that did not recognize their responsibility to comply with environmental regulations.

INNOVATION

The Region met the challenge and designed a compliance assurance and enforcement program that seeks out partnerships, and is multi-media. A partnership between industry, the States, the American Foundrymens Society and EPA formed to provide compliance incentives to the industries that participated in the initiative. EPA provided training and technical assistance to the States. The States held training seminars with hands-on help for the foundries.

RESULTS

The inspection and enforcement component of the initiative resulted in some 5500 tons of hazardous waste being removed from communities and over $1.4 million in penalties. The compliance assistance portion of the initiative reached a substantial number of the foundries in the States (Oklahoma, Louisiana, and Texas) that have completed their program. Many companies have requested audits, completed self audits, or asked for technical assistance. Companies have requested and modified permits and changed operating procedures as a result of the program.

2. TEXAS CITY, TEXAS - A MULTI-AGENCY APPROACH TO ENVIRONMENTAL COMPLIANCE

PROBLEM

Located on Galveston Bay, the city ranks very high using risk criteria developed by the Region. The region initiated a Community Based Environmental Protection (CBEP) program at Texas City. The CBEP program started with a series of inspections to establish a compliance baseline. The Mayor of Texas City approached EPA about developing a program in partnership with Texas Natural Resource Conservation Commission (TNRCC), Galveston County Health Department (GCHD) and the industry greater environmental compliance than could be obtained through traditional inspections. EPA wanted a multimedia approach that would not compromise protection of human health and the environment. Industry wanted the

opportunity to work with the regulators to review their facilities and environmental management systems without incurring large penalties for problems that were discovered and corrected.

INNOVATION

It was decided to use existing policy, EPA Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations (Self Audit Policy) for large industry and the Small Business Policy for small businesses. The application of the Self Audit Policy and the Small Business Policy to all of the industry in a city is unique. Texas City designated the program the Clean Star Texas City Program (CSTC). A multi-media program has been drafted by the work group to present to the public for comments. Traditionally, the regulatory agencies have no input into the self audit process and can not determine how comprehensive they are or effective in identifying and correcting compliance problems. Under the CSTC approach, EPA will have input into developing a comprehensive self audit protocol and will develop first hand knowledge on self audit programs that can be applied to other facilities. In addition, EPA/TNRCC can participate in the audit to provide oversight of the process. The development of the program has also focused on ways to involve the community and will address their comments in an agreement that will besigned by the regulators and regulated community.

RESULTS

The program is planned to start in the fall of 1997, and will be given an 18 month trial period. EPA (multi-media and multi-divisional), TNRCC, GCHD and texas City have formed a work group to define what the program will be and how it will work. EPA/TNRCC will pursue any violation(s) found that present an imminent and substantial endangerment to public health or the environment and criminal actions. EPA will pursue any economic benefit derived from violations.

3. HENYRETTA, OK PROVIDES EXCELLENT EXAMPLE OF CBEP

PROBLEM

Henyretta, Oklahoma, is a community of 6,000 in central Oklahoma, approximately 60 miles south of Tulsa. From approximately the turn of the century of 1980, a zinc smelter occupied 70 acres on the northeast side of the community. When the smelter ceased operation, it left a large area contaminated with heavy metals, predominately lead. Lead tailings were also taken from the site to cover driveways in the community as a dust suppressant. Other environmental problems in Henryetta included water infastructure, water pressure maintenance leading to water line leaks, excessive sludge buildup at the sewage treatment plant, and solid waste.

INNOVATION

In November, 1995, EPA, Region 6 met with the City of Henryetta and the Oklahoma Department of Environmental Quality (ODEQ) to discuss providing environmental assistance to the community. This group became known as the Henryetta Workgroup. The Workgroup compiled an Action Plan of 15 separate projects in hazardous waste site control, water and solid waste. Teams from EPA, ODEQ and the City worked on all projects and a monthly meeting discussed the status of the projects, as well as impediments and opportunities for resolution.

RESULTS

The Henryetta Community Based Environmental Process Project (CBEP) has made tremendous strides in not only addressing the environmental problems of the City but in showing how Federal, State and local environmental workers can work together to solve problems. The abandoned smelter site has completely removed and covered. Newly discovered smelter sites are being addressed. The lead fill material that was taken to the community for dust control has been removed. A heavy brush chipper to dispose of brush has been purchased and is operating, a recycling center is City's drinking water quality has been tested and proven safe, new water lines and a new lift station for the sewage treatment plant are under construction, and the City's drinking water and sewage lines have been mapped. The last project that will be completed is to develop a long-term water and solid waste infrastructure plan for the City. The Workgroup estimates that the Henryetta CBEP project has saved the City approximately $3 million in environmental costs.

Most importantly, the City has now become a prime investment point because the 70 acre abandoned smelter site has been revitalized and other environmental problems are controlled.

3. GALVESTON BAY

PROBLEM

It is believed that chronic compliance problems in Galveston Bay, Texas, are associated with the small low-volume treatment plants. This project is in response to the Galveston Bay Plan, a comprehensive conservation and management plan produced by the Galveston Bay Estuary Program under Section 320 of the Water Quality Act, that was adopted in October 1994. The Plan identified 17 specific problems in the Galveston Bay area.

INNOVATION

The Region 6 Water Enforcement Branch is participating in pilot project with the Galveston Bay Estuary Program (GBEP). In response to the Plan, Harris County Pollution Control Department (HCPCD) is conducting a demonstration project for CBEP. The project is funded through a grant from EPA through the Texas Natural Resource Conservation Commission (TNRCC). It was part of the initial phase of the project to develop a task force that would be utilized for expert advice regarding project progress. This task force members are from HCPCD, GBEP, TNRCC, EPA, the city of Houston, Harris County Attorney's office, Manning Engineering Corporation, and Waste- Water Treatment, Inc. The task force members initially met to determine the focus and goal of the project. Therefore, the project's focus was identified as follows: to evaluate the current compliance monitoring programs for small wastewater treatment plants; to make recommendations of solutions and mechanisms to implement an improved compliance monitoring and enforcement plan and to expand the improved management plan throughout the Galveston Bay watershed.

The other Galveston Bay project currently in the draft phase is one addressing Actions PS-3 (PS-3: Point Source-3, Regionalize Small Wastewater Treatment Systems) and PS-4 (identified above) from the Galveston Bay Plan. This project, currently in the draft funding phase, will build off the project currently being completed. This draft project will address sludge management with the possibility of regionalized sludge management and disposal.

RESULTS

The project is addressing actions stated and identified in the Galveston Bay Plan. The specific action for this particular project is Action PS-4(PS:Point Source) — Improve Compliance Monitoring and Enforcement for Small Dischargers. To date, the task force has met four times. The sampling and analysis has been completed at the facilities in the targeted sub-watershed. During the third meeting, the task force discussed results of the sampling and common problems at the plants. The fourth meeting again focused on the common problems at the plants and discussed future technical assistance. The meeting also focused on recommendations to improve compliance monitoring programs.

5. OSAGE NATION — COMPLIANCE PROJECT

PROBLEM

Numerous brine spills and occasional oil spills from stripper well production and injection well operations contaminate surface waters in Osage County, Oklahoma. Because the surface right owner is usually different than the mineral right owner (Osage Tribe), EPA receives numerous complaints concerning contaminated livestock water or fish kills. It has been apparent that many small oil and gas producers in Osage County are not fully aware of the requirements of surface water and oil pollution programs. It has also been observed that many pollution problems could be avoided or reduced through improved housekeeping and low-cost pollution prevention measures.

INNOVATION

With this information in mind, EPA facilitated the formation of a workgroup consisting of major stakeholders including: EPA, the Bureau of Indian Affairs, the Osage Tribal Council, and the Osage Producers Association in April 1996. The purpose of the workshop was to develop a technical manual and outreach plan to educate producers. The technical manual was developed to explain in layman's terms regulatory requirements and provide technical recommendations on low- cost pollution prevention measures. After the implementation of the technical manual into common use, workshops will be held to educate the producers regarding environmental issues. The review of the technical manual was completed in June of 1997 by the workgroup. The technical manual was distributed in August 1997 and workshops will be held in the Fall of 1997.

RESULTS

It is anticipated that the compliance assistance approach will foster enhanced compliance with the regulations.

Region VI also participates in the following voluntary program activities:

General Reinvention and Voluntary Programs

Contact: Rob Lawrence (214) 665-2258; E-mail: lawrence.rob@epamail.epa.gov

Pollution Prevention

Pollution Prevention grants and technical assistance

Contact: Eli-Martinez (214) 665-2119; E-mail: martinez.eli@epamail.epa.gov

U.S./Mexico Pollution Prevention Workgroup

Contact: Joy Tibuni (214) 665-8036; E-mail: tibuni.joy@epamail.epa.gov

Community-Based Environmental Protection
Contact: Cindy Wolf (214) 665-7291; E-mail: wolf.cindy@epamail.epa.gov

Climate Change
Contact: Joyce Stanton (214) 665-7218; E-mail: stanton.joyce@epamail.epa.gov

Indoor Environment
Contact: Steve Vargo (214) 665-6714; E-mail: vargo.steve@epamail.epa.gov

Pesticide Environmental Stewardship Program
Contact: Jerry Oglesby (214) 665-7563); E-mail: oglesby.jerry@epamail.epa.gov

Voluntary Standards Network - (ISO 14000)
Contact: Bob Clark (214) 665-6487; E-mail: clark.bob@epamail.epa.gov

Waste Minimization National Plan
Contact: Jim Sales (214) 665-6796; E-mail: sales.jim@epamail.epa.gov

Water Alliance for Voluntary Efficiency (WAVE)
Contact: TomReich (214) 665-7169; E-mail: reich.tom@epamail.epa.gov

WasteWi$e
Contact: Willie Kelley (214) 665-6760; E-mail: kelley.willie@epamail.epa.gov

Landfill Methane Outreach Program
Contact: Mick Cote (214) 665-7219; E-mail: cote.mick@epamail.epa.gov

Project XL
Contact: Adele Cardenas (214) 665-7210; E-mail: cardenas.adele@epamail.epa.gov

Project XL for Communities
Contact: David Bond (214) 665-6431; E-mail: bond.david@epamail.epa.gov

Common Sense Initiative
Contact: Craig Weeks (214) 665-7505; E-mail: weeks.craig@epamail.epa.gov

Green Lights/Energy Star
Contact: Patrick Kelley (214) 665-7316; E-mail: kelley.patrick@epamail.epa.gov

Energy Star Buildings
Contact: Patrick Kelley (214) 665-7316; E-mail: kelley.patrick@epamail.epa.gov

Energy Star Office Equipment
Contact: Patrick Kelley (214) 665-7316; E-mail: kelley.patrick@epamail.epa.gov

REGION 7
KANSAS CITY VOLUNTARY PARTNERSHIP PROGRAM EFFORTS

EPA's Kansas City Office provides an array of voluntary and partnership programs for the Middle West public and private sectors and communities. These programs are administered by individuals and teams of scientific, engineering, technical, and outreach staff who focus on assisting state and local partners, industrial sectors and other priority areas. The Region hosts the Agriculture Compliance Assistance Program. We participate in many national voluntary programs including Climate Wise, Common Sense Initiative, Design for the Environment, Environmental Leadership Program, Green Lights/Energy Star, ISO 14000, Pesticides Environmental Stewardship Program, Project XL, Waste Minimization National Plan and WasteWi$e. The programs which are unique to our region are described in detail below.

Recognition

Pollution Prevention Awards for Environmental Excellence
The annual award program is open to government, industry and community groups and recognizes a broad variety of activities which include raw materials usage, solid and hazardous waste generation, inventory losses, spill controls, water or energy conservation and environmental releases and contributions to all of the voluntary programs. The award program is in its 6th year and promotes innovative and beneficial practices. A publication is developed featuring the award winners and their projects which is widely disseminated in the middle west. The region also conducts a Midwest Pollution Prevention Conference which recognizes the award winners and features their contributions. ***For more information, contact Jim Callier, Chief, TSPP at (913) 551-7646; E-mail: callier.jim@epamail.epa.gov***

Assistance

Region 7 Pollution Prevention Roundtable
The technical assistance providing agencies in the middle west have formed the Roundtable which includes state and local governments, universities, NIST program providers, and selected energy offices. Members of this organization provide access to many of the EPA voluntary programs, coordinates training and technical assistance efforts in the middle west and is developing a web page linking to the compilations of national resource documents and case studies. They publish a newsletter which provides timely information on events, new information available, etc.

Midwest Pollution Prevention Conference
With the Roundtable, EPA's Region 7 planned and conducted a Midwest Pollution Prevention Conference which addressed many of the efficiency issues facing agriculture and small business. Voluntary programs were highlighted with speakers, presentations in our booth, and in the literature made available. The 300 attendees were treated to energy efficiency displays, alternative fuel motor vehicles, fertilizer and pesticide management techniques, fluids management, energy and materials assessment methods, etc. The impact of the conference will be assessed early in 1998 and plans for another prepared. Proceedings are available through the Region 7 Home page. ***Contact: Marc Matthews, TSPP (913) 551-7517; E-mail: matthews.march@epamail.epa.gov***

Voluntary Programs Assistance

The Regional Office maintains a list of contacts for both regional and national voluntary programs and for information on events that are taking place.

Concerning Climate Wise and Green Lights/Energy Star and Landfill Methane Gas
Contact: Chet McLaughlin, TSPP (913) 551-7666; E-mail: mclaughlin.chet@epamail.epa.gov

Concerning Common Sense Initiative and Design for the Environment and Waste Minimization
Contact: Gary Bertram, TSPP (913) 551-7533; E-mail: bertram.gary@epamail.epa.gov

Concerning ISO 14000 and EMS
Contact: Ruben McCullers, TSPP (913) 551-7455; E-mail: mccullers.ruben@epamail.epa.gov

Concerning Project XL and Environmental Leadership Program
Contact: Jamie Bernard-Drakey, OEC (913) 551-7400;
E-mail: bernard-drakey.jamie@epa.mail.epa.gov

Concerning WasteWi$e
Contact: Dave Flora, TSPP (913) 551-7523; E-mail: flora.david@epamail.epa.gov

Concerning Pesticides Environmental Stewardship
Contact: Glen Yager, PEST (913) 551-7296: E-mail: yager.glen@epamail.epa.gov

Concerning Indoor Environments
Contact: Bob Dye, RALI (913) 551-7605; E-mail: dye.robert@epamail.epa.gov

Small Business Ombudsman

Region 7 recognizes that the small businesses that fuel the region's economy often have a difficult time understanding and meeting environmental requirements. We have appointed an ombudsman to help small businesses make sense of environmental requirements and find assistance to improve their environmental performance. ***For more information, contact Charles Hensley, OEP at (913) 551-7519; E-mail: hensley.charles@epamail.epa.gov***

Information

Region 7 Home Page
The home page for the Region includes write ups, contacts and pertinent information on each of the voluntary programs which the Region participates in. The information from the awards program is also available with the papers from the Midwest Pollution Prevention Conference as resources. (Http://www/epa.gov/region07/specinit/p2p2.html).

Region 7 Internet Kid Page

The Region 7 Kids Page serves as a vehicle to provide environmental information to the public. The Kids Page contains information on many of the environmental programs in a style that is fun, informative, and easy to understand. This makes the Kids Page of interest to almost everyone of ages 6 and up. (Http://www/epa.gov/region07/kids/welcome.html).

For more information, contact Gary Bertram, TSPP at (913) 551-7533;
E-mail: bertram.gary@epamail.epa.gov.

EPA REGION 8
DENVER VOLUNTARY PARTNERSHIP PROGRAM EFFORTS

EPA's Denver Office provides an array of voluntary and partnership programs for the Rocky Mountains, public and private sectors and communities. These programs are administered by individuals and teams of scientific, engineering, technical, and outreach staff who focus on assisting state and local partners, industrial sectors and other priority areas. We participate in many national voluntary programs including Climate Wise, ENERGY STAR Buildings and Office Equipment, Sustainable Development, Project XL, Landfill Methane Outreach Program, Waste Minimization National Plan, Pollution Prevention, Indoor Environment, Pesticide Environmental Stewardship Program, Voluntary Standards Network, WAVE, Design for the Environment and WasteWi$e. The programs contacts and activities unique to Region 8 are described in detail below.

Region 8 has a summary document of which provides the background and contacts on 100 programs and initiatives active in the Region. The 12 pages describes regional and national initiatives such as number of voluntary initiatives with national ties such as the Brownfields program under David Ostrander, Community Based Environmental Protection program under Karen Hamilton and an Air Quality Initiative through the Western Governor's Association lead by Larry Svoboda. The latter initiative is to evaluate ways of making air quality management more effective. It includes Western States and broad stakeholders participation. Other Region 8 initiatives include an Environmental Technology program under Bob Stone, Children in their Earliest Years under Sara Summers, EMPACT under Eleanor Dwight, Mining under Jim Dunn, Urban Livability Initiative under Mark Komp, Utah 2002 Olympics under Dean Gilliam, American Heritage Rivers under Gene Reetz, Oil Pit Initiative under Ron Lillich, and OECA Sector Initiatives lead by a number of staff. For further information, please contact Region 8. The national programs and contacts are as follows:

ENERGY STAR Buildings
Actively involved in marketing the program. Regional emphasis is on small business, educational institutions, hospitality industry and hospitals. Respond to requests for information. Do public outreach.
For more information, contact Judy Wong at (303) 312-6390;
E-mail: wong.judy@epamail.epa.gov.

ENERGY STAR Office Equipment

Provide information to customers upon request
For more information, contact Judy Wong at (303) 312-6390;
E-mail: wong.judy@epamail.epa.gov.

WasteWi$e
Actively market program to business, hospitals and local government. Respond to requests for information. Do public outreach. ***For more information, contact Judy Wong at (303) 312-6390;***
E-mail: wong.judy@epamail.epa.gov.

Landfill Methane Outreach Program
Monitoring program only, because landfill size im Region 8 is primarily small to medium. ***For more information, contact Jerry Allen at (303) 312-7008; E-mail: allen.gerald@epamail.epa.gov.***

Project XL
Monitoring contact: Deanna Peterson (303) 312-6320; E-mail: peterson.deanna@epamail.epa.gov

Climate Change
Actively promoting program. Organized climate change forum. Coordinated downlink sites for the White House Conference on Climate Change.
Contact: Laura Farris (303) 312-6189; E-mail: farris.laura@epamail.epa.gov

Sustainable Development
(Not a program or initiative yet)

Region is promoting an outreach program both internally and, in cooperation with other EPA Regions, across the central and western United States. The Region has an active sustainability grant program.
Contact: David Schaller (303) 312-6146; E-mail: schaller.david@epamail.epa.gov

Pollution Prevention
Pollution Prevention grants and assistance - Administers pollution prevention grants program.
Contact: Linda Walters (303) 312-6385; E-mail: walters.linda@epamail.epa.gov

Indoor Environment
Contact: Milt lammering (303) 312-6147; E-mail: lammering.milt@epamail.epa.gov

Pesticide Environmental Stewardship Program - Recruits partners.
Administers grants program for projects designed to reduce pesticide use.
Contact: John Larson (303) 312-6030; E-mail: larson.john@epamail.epa.gov

Voluntary Standards Network - (ISO 14000)
Tracks progress in development of standards. Region 8 representative.
Contact: David Schaller (303) 312-6146; E-mail: schaller.david@epamail.epa.gov

Waste Minimization National Plan
Contact: Marie Zanowick (303) 312-6403; E-mail: zanowick.marie@epamail.epa.gov

Water Alliance for Voluntary Efficiency (WAVE)
Provides information about the program
Contact: Brian Friel (303) 312-6277; E-mail: friel.brian@epamail.epa.gov

Design for the Environment
Contact: Jack Hidinger (303) 312-6387; E-mail: hidinger.jack@epamail.epa.gov

EPA REGION 9
VOLUNTARY POLLUTION PREVENTION PARTNERSHIPS

EPA Region IX manages and supports a range of voluntary pollution prevention partnership programs. The Region participates in HQ-lead efforts such as Green Lights, the Common Sense Initiative, Project XL, the Waste Minimization National Plan, Environmental Leadership Program and other national voluntary programs. Region IX has also initiated partnerships including: Agriculture Initiative, Green Business Recognition Program, Merit Partnership for Pollution Prevention, South Phoenix/Los Angeles Metal Finishing Project.

Region 9 Contacts for Partnerships and Initiatives

Agriculture Initiative*
Contact: Alisa Greene (415) 744-1479

Bay Area Green Business*
Contact: Leif Magnuson (415) 744-2153

Brownsfield
Contact: Jim Hanson (415) 744-2237

Community Based Environmental Protection
Contact: Stephanie Valentine (415) 744-1178

Community Based Monitoring Program - EMPACT
Contact: Weinke Tax (415) 744-1223

Common Sense Initiative (Electronics)
Contact: David Jones (415) 744-2266

Design for the Environment (Dfe)
Contact: Eileen Sheehan (415) 744-2190

Environmental Justice
Contact: Willard Chin (415) 744-1204

Environmental Leadership Project/ENVEST
Contact: Jeff Rosenbloom (415) 744-1962

Environmental Technology Initiative
Contact: Wienke Tax (415) 744-1223

Forestry Initiative*
Contact: Jane Freeman (415) 744-2006

Green Lights/Energy Star/Climate Wise
Contact: Mike Stenberg (415) 744-1102

ISO 14000
Contact: Laura Bloch (415) 744-2279

Merit Partnership*
Contact: Dan Reich (415) 744-1343

Metal Finishing Partnership*
Contact: Leif Magnuson (415) 744-2153
or Laura Bloch (415) 744-2279

Pesticide Environmental Stewardship Program
Contact: Roccena Lawatch (415) 744-1068

Pollution Prevention Coordinators
Contact: Bill Wilson (415) 744-2192
Eileen Sheehan (415) 744-2150
John Katz (415) 744-2153
Josephine Chien (415) 744-2149

Project XL
Contact: Jeff Rosenbloom (415) 744-1962

Regulatory Reinvention
Contact: Fred Leif (415) 744-1017

Urban Initiative
Contact: Sara Russell (415) 744-1157

Waste Minimization National Plan
Contact: John Katz (415) 744-2153

WasteWi$e
Contact: Jessica Gaylord (415) 744-2150

WAVE (Water Alliances for Vol. Efficency)
Contact: Nancy Yoshikawa (415) 744-1163

**indicates a partnership program established only in Region 9 (e.g. not at HQ or other EPA Regions)*

Agriculture Initiative: EPA Region 9 established a Regional Agriculture Team in FY97 with a goal of incorporating agricultural pollution prevention principles into core agency programs to achieve measurable source reduction affecting the Region's air quality, aquatic habitat, water quality and human health. The Ag Initiative commenced with a training period for Region 9 staff aimed at educating staff on agricultural pollution prevention. The Ag Initiative works at the farm level to demonstrate environmental results and at the policy level to build institutional support for agricultural pollution prevention. Working with a Regional Ag Team, the Ag Initiative focuses on activities that will develop public-private partnerships, further sustainable development, foster environmental justice and evaluate success against environmental measures. The Ag Initiative is lead by the Cross Media Division. ***Contact: Alisa Greene, (415) 744-1107; E-mail: greene.alisa@epamail.epa.gov***

Bay Area Green Business Program: The Bay Area Green Business Program is a voluntary incentive program to encourage business environmental responsibility. Participating businesses receive public recognition for multimedia environmental compliance and pollution prevention achievements. Through a coordinated inspection and verification process, a business that meets or exceeds environmental standards set by the program will be recognized as a Green Business , and allowed to use the Program logo in its advertising and promotional activities. Auto repair shops will be first sector recognized in both Alameda and NAPA counties, and wineries will also be addressed in NAPA county. ***Contact: Leif Magnuson, (415) 744-2153; E-mail: magnuson.leif@epamail.epa.gov***

Merit Partnership: The Merit Partnership is a voluntary program involving industry representatives, state and local regulatory agencies, community members and EPA Region IX. The goal of Merit is to work in partnership with the private sector to implement innovative projects (usually P2) that demonstrate how to reduce environmental impacts in ways that make good business sense. Projects proposed to Merit are evaluated by a community advisory panel and a steering committee of industry and agency representatives. Recently, the Merit Partnership has focused its effort on ISO 14000, a metal finishing project in Southern California, industrial laundries and alternative fuel vehicles at airports.
Contact: Dan Reich, (415) 744-1343; E-mail: reich.dan@epamail.epa.gov

Metal Finishing Partnership: Region 9 is working directly with metal finishing facilities in South Phoenix and Los Angeles to assess and implement P2 technologies and approaches. The projects documented the results of the facility projects to illustrate the environmental and economic benefits of the pollution prevention efforts. To promote P2 to other metal finishers, they are disseminating their results through a series of factsheets, reports, and technical workshops, and have developed high-quality videos for both line workers and managers.
Contact: Leif Magnuson, (415) 744-2153 or Laura Bloch, (415) 744-2279

EPA REGION 10
POLLUTION PREVENTION TEAM

The Region 10 Core P2 Team is a network of EPA staff charged with supporting state prevention programs, implementing leadership of voluntary P2 programs and integrating Preventing into traditional state and federal environmental programs.

Planning/Project XL/General Info.
Contact: John Palmer, P2 Manager, (206) 553-6521; E-mail: palmer.john@epamail.epa.gov

Grants/Evergreen Award/General Info.
Contact: Carolyn Gangmark, P2 Coordinator, (206) 553-4072;
E-mail: gangmark.carolyn@epamail.epa.gov

Energy Star/Green Lights
Contact: Dick Rautenberg, Energy Star/Green Lights, (206) 553-2148;
E-mail: rautenberg.dick@epamail.epa.gov

Energy Star/Green Lights
Contact: John Grobler, Energy Star/Green Lights, (206) 553-1196;
E-mail: grobler.john@epamail.epa.gov

P4 Projects
Contact: Dave Dellarco, Reinvention Specialist, (206) 553-4978;
E-mail: dellarco.dave@epamail.epa.gov

P4 Projects Effluent Trading
Contact: Clare Schary, Pollutant Trading Programs, (206) 553-8514;
E-mail: schary.clare@epamail.epa.gov

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

Pacific Northwest Pollution Prevention Research Center
The Pollution Prevention Research Center (PPRC) is a non-profit public/private partnership formed to identify opportunities and overcome obstacles to pollution prevention in the Northwest. The PPRC acts as a referral service providing links to a wide variety of information sources from technical assistance to advice on funding sources. The Center publishes a bimonthly newsletter, which covers a wide variety of pollution prevention topics, and facilitates Region 10's P2 Roundtable.
Contact: Madeline M. Grulich, Executive Director

PPRC
1326 Fifth Avenue, Suite 650
Seattle, WA 98101
Phone: (206) 223-1151
Fax: (206) 223-1165
E-mail: office@pprc.org
website: http://www.pprc.org/pprc

PPRC Northwest National Laboratory
The Pacific Northwest Laboratory (PNNL) has established the Office of Small Business Programs to provide technical assistance to small businesses. The office provides technical assistance, use of the laboratory's facilities, access to the laboratory's procurement system, commercialization of technologies, personnel exchanges, guidance for federal assistance programs, cooperative research and development agreements and referrals to other agencies.

Contact: Gary E. Spanner
Office of Small Business Programs
Pacific Northwest Laboratory
Battelle Boulevard
P.O. Box 999/K1-38
Richland, WA 99352
Phone: (509) 372-4296
Fax: (509) 372-4589
E-mail: gary:spanner@pnl.gov
website: http://www.pnl.gov/

Over the last several years, it has become clear that voluntary goals and commitments achieve real environmental results in a timely and cost-effective way. Cooperative partnerships, involving a variety of groups, have produced measurable environmental results often more quickly and with lower costs than would be the case with regulatory approaches. These partnership efforts are the key to the future success of environmental protection.

EPA

Project XL
EPA will choose 50 projects to be part of the pilot. The project plans to achieve environmental performance that is superior to what would be achieved through compliance with current and future regulation. Participants are given the flexibility to develop common sense, cost-effective strategies that will replace or modify specific regulatory requirements, on the condition that they produce greater environmental results.
Contacts: Region 10 John Palmer (facilities) (206) 553-6521
Contacts: Region 10 Bill Glasser (communities) (206) 553-7215

Environmental Leadership Program (ELP)
This program is designed to recognize and provide incentives to facilities willing to develop and demonstrate

innovative approaches to establishing accountability for compliance with existing laws. These incentives include public recognition, decrease in routine regulatory inspections as well as limited time to correct violations.

Contacts: Region 10 Dave Tetta (206) 553-1327

Green Lights
Green Lights is the flagship Energy Star program which encourages businesses and governments to install energy efficient lighting technologies. Using these technologies, facilities can reduce lighting energy consumption by 50% or more while delivering the same or better quality lighting.

Total participants in the Region: 9
Metric tons of C02 prevented per year: 6,074
Cars equivalent per year: 1,339

Contacts: Region 10 Dick Rautenberg (206) 553-2148

Contacts: Region 10 John Grobler (206) 553-1196

ENERGY STAR
The purpose of ENERGY STAR is to maximize energy efficiency and to reduce atmospheric pollution by upgrading.

- ENERGY STAR Buildings - Maximize energy efficiency in commercial and industrial buildings. Total participants: 217 (as of 5/27/97).
- ENERGY STAR Residential Programs - Promote energy efficiency through new home design and residential use of energy efficient products.
- ENERGY STAR Office Equipment - Increase manufacture of energy efficient products.
- ENERGY STAR Transformer Program - Increase use of high efficiency distribution transformers by utilities and manufacturers.

Contact: Region 10 Dick Rautenberg (206) 553-2148

Contact: Region 10 John Grobler (206) 553-1196

Climate Wise
This is a program that encourages industry to adopt flexible, comprehensive approaches to reducing greenhouse gas emissions by helping companies turn energy efficiency and pollution prevention into a corporate asset. The three goals are to (1) encourage the immediate reduction of energy use and greenhouse gas emissions in the industrial sector through cost-effective, flexible actions, (2) change the way companies view and manage for environmental performance by demonstrating the economic and

productivity gains associated with "lean and clean" management and (3) foster innovation by allowing participants to identify the actions that make the most sense for their organization.

39 partners in Region 10

Voluntary Aluminum Industrial Partnership (VAIP)
This is an innovation environmental stewardship and pollution prevention program developed in the U.S. primary aluminum industries. Companies joining the VAIP commit to make reductions in perfluorocarbon gas emission (PFCs) by improving aluminum production efficiency. Benefits include energy savings for VAIP Partners, public recognition and technical assistance from experts in industry, government and academia.

4 companies in Region 10

AgSTAR
AgSTAR os a program that promotes cost-effective methods for reducing methane emissions through manure management. AgSTAR is also designed to remove barriers that impede the widespread adoption of technologies that capture and utilize the energy value in agricultural methane. The swine and dairy industries that participate in the program derive three main benefits - environmental, business and public relations.

1 Ag partner in Region 10

Pesticide Environmental Stewardship Program
The PESP is a broad effort to reduce pesticide use and risk in both agriculture and nonagriculture settings. The two major goals are to develop specific use/risk reduction strategies that include reliance on biological pesticides and other approaches to pest control that are thought to be safer than traditional chemical methods and to have 75 percent of US agricultural acreage adopt, by the year 2000, integrated pest management programs.

70 partners nationally of which several have operations in Region 10
4 partners based in Region 10

Contact: Region 10 Karl Arne (206) 553-2576

WasteWi$e
WasteWi$e is an EPA challenge program for commercial sector waste reduction, recycling, buying/manufacturing recycled products. The program offers technical assistance, quarterly workshops, newsletters and success stories.
34 partners in Region 10

Contact: Region 10 Domenic Calabro (206) 553-6640

State of Alaska

Green Star

Green Star is a program demonstrating that pollution prevention and energy conservation can save money and improve your businesses profitability. The program recognizes businesses, schools, and other organizations which implement a series of waste reduction, recycling reuse and resource conservation activities. Upon completion a Green Star award can be displayed in the workplace and the business earns positive publicity through promotional campaigns. Over 400 business firms, government agencies, schools and non-profit organizations have signed on.

Contact: Region 10 Terri Raudenbush
Green Star Program
250 Cushman St., Suite 2D
Fairbanks, AK 99701-4665
(907) 452-1105

State of Idaho

Green Star Lewiston

A pollution prevention and energy-efficiency program that benefits businesses through measurable cost savings, reduced liabilities, free promotional/PR opportunities and a positive marketing and corporate image.

25 participants to date (local, state & govt.)

Contact: Region 10 Green Star Program
Lewiston Chamber of Commerce
2207 E. Main Street
Lewiston, ID 83501
Phone: (208) 799-4370
Fax: (208) 743-2176

State of Oregon

Green Permits Program

Contact Oregon Department of Environmental Quality or the City of Portland for the latest programs.

State of Washington

State XL Program

Contact: Jonathan Williams
Washington Department of Ecology
P.O. Box 4760
Olympia, WA 98504
(306) 407-6968

City of Spokane Green Star
The purpose of the Spokane Green Star program is to assist and recognize businesses in their efforts to be environmentally responsible. The program is designed for any size operation.

Over 100 businesses to date

Contact: Lucy Gurnea
Associated Industries of the Inland Northwest
P.O. Box 2125
Spokane, WA 99210-2125
(509) 326-6885

EnviroStars
EnviroStars profiles businesses that have reduced hazardous waste in success stories that are distributed to local media. The rating system (from two to five stars) is based on a company's commitment to hazardous waste reduction.

King County - 73 businesses
Snohomish County - 5 businesses
Kitsap County - 2 businesses

Contact: Laural Tomchick
Local Hazardous Waste Management Program in King County
130 Nickerson Street, Suite 100
Seattle, WA 98109
Phone: (206) 689-3090
Fax: (206) 689-3070
E-mail: laurel.tomchick@metrokc.gov
Website: http://www.metrokc/gov//lhwmp.cesqg/eshecom.html

Green Works
A program that recognizes businesses who are reducing waste, recycling and buying recycled products by highlighting them in an advertising campaign, publishing a recycling newsletter and awarding a Green Works window decal and achievement certificate.

440 Green Works members to date

Contact: King County Solid Waste Division
Attn: Lisa Sepanski
600 Yesler Building
400 Yesler Way
Seattle, WA 98104
Phone: (206) 296-8800
Website: http://www.metrokc.gov/dnr/swd/greenwk

Businesses for Clean Water
This program assists businesses in reducing stormwater pollution from their site. Staff provide information on how to comply with local requirements. These businesses receive recognition via media, directories, newsletters and certificates of recognition.

Over 60 businesses are active participants

Contact: Sandy Kilroy
King County Water & Land Resources Division
700 Fifth Avenue, Suite 2200
Seattle, WA 98104
Phone: (206) 296-1900
Website: http://splash.metrokc.gov

EPA Region 10

The Evergreen Award
The EPA Region 10 Evergreen Award honors environmental leaders in the business community who have demonstrated that preventing pollution is a sound business practice. EPA seeks to showcase companies of all sizes and sectors of all economy that are committed to environmental excellence through pollution prevention achievements, commitment to environmental quality and environmental leadership.

Five awards have been presented to date

Contact: Carolyn Gangmark
U.S. EPA Region 10 (OI-085)
1200 Sixth Avenue
Seatlle, WA 98101
Phone: (206) 553-4072
Fax: (206) 553-8338
E-mail: gangmark.carolyn@epamail.epa.gov

Alaska

Commissioner's Annual Pollution Prevention Award
This award recognizes exemplary waste reduction and recycling activities.

Contact: David Wigglesworth
Alaska Department of Environmental Conservation
3601 C Street, Suite 1334
Anchorage, AK 99503
Phone: (907) 269-7582

Oregon

Portland's Environmental Services Awards
These awards are given annually during Pollution Prevention Week to various partners who have demonstrated environmental benefits, technologies and/or management innovation, economic benefit or dissemination of knowledge of others.

17 awards have been presented to date

Contact: Margaret Nover
Portland's Environmental Services
1120 SW 5th. Avenue, Room 400
Portland, OR 97204
Phone: (503) 823-7623

Washington

Governor's Award
This award program focuses on reductions of hazardous substances and wastes. To be considered, applicants must have demonstrated source reduction of toxic substances, emissions or hazardous waste. The criteria are innovation, reduction achieved, direct benefits, overall environmental benefits and commitment and leadership.

39 awards have been presented to date
4 continuing excellence awards

Contact: Bonnie Lynn Meyer
Governor's Award
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
Phone: (360) 407-6740

WIN - Environmental Achievement Awards
These awards honor small businesses, organizations and individuals in the Puget Sound area whose efforts have resulted in the prevention of pollution. Winners have minimized the use of hazardous materials, developed less hazardous products and fostered an ethic or personal responsibility for the environment among employees, peers and the public.

38 business/individual awards to date
11 honorable mentions
1 business for continued excellence in P2

Contact: WIN
130 Nickerson St., Suite 100
Seattle, WA 98109
Phone: (206) 689-33050

Green Globe
This award recognizes outstanding achievement in environmental stewardship in several categories: hazardous waste reduction, market development for recycled products, water quality protection, environmental education, biosolids recycling, waste prevention and use of recycled materials, wildlife habitat protection, agricultural best management practices and industrial waste reduction.

8 Business Leadership awards have been presented
7 Business Merit awards (awarded to date in 9 different categories)

Contact: Laurel Tomchick
Tech. Asst. & Pollution Prevention Team Lead
130 Nickerson St., Suite 100
Seattle, WA 98109
Phone: (206) 689-3063
Fax: (206) 689-3070
E-mail: laurel.tomchick@metrokc.gov/hazwaste

F. INDIVIDUAL PROGRAM ACCOMPLISHMENTS AND SUCCESS STORIES

1. ENERGY STAR OFFICE EQUIPMENT PROGRAM

Program Accomplishments:

- Current ENERGY STAR products include computers, monitors, printers, faxes. Scanners and multi-functional devices. Over 350 computer and monitor manufacturers, representing more than 80 percent of U.S. sales, have joined the program and are producing ENERGY STAR computers. More than 90 manufacturers of imaging products have joined, representing more than 90% of U.S. sales. Over 150 industry allies now produce devices and software that help computers, monitors and imaging equipment take advantage of power management. More than 2,000 ENERGY STAR complaint products are now widely available both in the U.S. and in many other countries. 1997 energy savings: 2 billion kilowatt hours per year; and $740 million per year. Annual emissions avoided: 1.85 MMTCE (million metric tons of carbon equivalent).

2. ENERGY STAR TRANSFORMER PROGRAM

Program Accomplishments:

- The ENERGY STAR Transformer Program encourages utilities to overcome barriers to purchasing cost-effective and energy-efficient distribution transformers. The program also encourages manufacturers to produce high-efficiency transformers using available technologies, Program status:

  - The ENERGY STAR Transformer Program was launched in April 1995 with over 85% of the transformer manufacturers participating as partners in the program.

  - Current utility partners are responsible for approximately 10 percent of transformer purchases in the United States.

3. ENERGY STAR® and Green Lights® Program

Program Accomplishments:

- More than 2,800 organizations have joined the ENERGY STAR Buildings and Green Lights Program. These companies are saving more than $330 million per year in energy bills. They are also reducing carbon dioxide pollution by 6.4 billion pounds per year, which is equivalent to removing the pollution from more than 640,000 cars. In the year 2000, ENERGY STAR Buildings and Green Lights participants are expected to annually reduce carbon dioxide pollution by 5.5 million metric tons,equivalent to removing the pollution from 4 million cars.

Specific Success Stories:

- The University of Missouri-Columbia was selected as a Green Lights Partner of the Year in 1995, and was one of the first universities to join the ENERGY STAR Buildings Program. By involving students in the upgrade process and discussing ENERGY STAR Buildings' five-stage upgrade strategy in class lectures, the University of Missouri has guaranteed that the

next generation of leaders will understand that environmental responsibility makes good business sense. The University currently saves more than $.15 million annually in energy costs as a result of its ENERGY STAR Buildings upgrades.

- Honeywell has been a leading advocate and participant in ENERGY STAR Buildings since the program began. The company helped shape the program by participating in the demonstration phase as a"showcase" participant, and later was the first company to commit implement ENERGY STAR Buildings upgrades in all of its U.S.- owned facilities. Honeywell saves more than $2 million annually form its energy- efficient initiatives.

4. INDOOR ENVIRONMENTS PROGRAM

Program Accomplishments:

- Through 1996, the Indoor Environments Program has made 73 percent of the American public aware of radon and over 10 million homes have been tested for radon. Over 300,000 of these homes have been fixed to reduce radon levels. Over one million homes have been built using radon-resistant construction methods.

- The percentage of homes in which children six and under are exposed to environmental tobacco smoke has decreased from 32% in 1992 to 27% in 1996.

- It is estimated that nearly 1000 schools across the nation have implemented good indoor air quality practices as outlined in EPA's Indoor Air Quality Tools for Schools.

Specific Success Stories:

- Reductions in radon exposure so far will result in approximately 200 fewer deaths each year. Exposure reductions achieved from 1986 through 1996 will result in at least 3000 lives saved.

- Awareness of radon in low-income and minority communities has doubled, and testing rates have risen by 50 percent since 1992. In addition, Native American's awareness and testing rates are high because of targeted use of State Radon Grant Funding.

5. LANDFILL METHANE OUTREACH PROGRAM

Program Accomplishments:

- The Landfill Methane Outreach Program encourages the development of cost- effective landfill gas-to-energy projects (landfills are the largest source of methane emissions in the United States). Program allies:

  - 19 State agencies (representing 14 states) and 18 utilities
  - Over 90 industry Allies representing the vast majority of the landfill gas-to- energy market.

To date, the Outreach Program has assisted in the development of over 35 landfill gas-to-energy projects, totally over 1.5 MMTCE greenhouse gas reductions.

6. 33/50 PROGRAM

Program Accomplishments:

- In 1997, the 33/50 Program's final year, overall reductions surpassed the 50% goals set back in 1991. Total TRI quantities of the 17 priority chemicals covered by the 33/50 Program went from 1,495 million pounds in 1988 (33/50's baseline year) to 664 million in 1995 (the target year for achieving a 50% reduction, and the most recent year of TRI data). This amounts to a 55.6 percent reduction, and the most recent year of TRI data). This amounts to a 55.6 percent reduction — 831 million pounds of pollutants that are no longer emitted to the air, discharged to waterways or public sewage treatment plants, injected underground or sent to off-site treatment facilities.

- This is a remarkable accomplishment, especially given the context in which they took place: the 33/50 Program has been EPA's first major experiment at building partnerships with industry and the public in order to promote ambitious environmental goals.

Specific Success Stories:

- The 1,300 companies that participated in 33/50 helped make its success possible through a great variety of innovative strategies for reducing pollution. More than 100 of these innovations have been documented by the creation of ***33/50 Success Stories***, a series of reports created by the companies themselves according to EPA's guidelines.

- These reports detail the energy, enthusiasm and creativity with which the companies met the challenges posed by their commitment to the 33/50 Program. The Success Stories are available on the Internet at ***www.epa.gov/opptintr/3350.***

7. CLIMATE WISE PROGRAM

Program Accomplishments:

- In less than 3 years, 248 companies, representing more than 7% of the U.S. industry energy use, have joined Climate Wise. This is a 400% increase in partners in just the last year. Climate Wise partners have committed to over 650 individual actions to improve industrial efficiency, reduce greenhouse gas emissions and protect the environment. These actions have yielded reductions of 700,000 metric tons of carbon dioxide and $34 million in savings. In addition, Climate Wise expects that company partners will reduce emissions equivalent to 3 million metric tons of carbon dioxide and save nearly one-half of a billion dollars by the year 2000.

Specific Success Stories:

American Portland Cement Alliance

- Climate Wise has developed an innovative partnership with the American Portland Cement Alliance, the principle cement industry trade organization in the United States. Compa nies representing more than 50% of U.S. Cement manufacturing capacity have joined the Climate Wise program through their trade association which is working closely with Climate Wise to facilitate the participation of their companies. By working with the entire industry, Climate Wise has been able to customize its assistance to develop a detailed model energy efficiency/pollution prevention action plan and a software package designed to specifically quantify and track cement company emissions reductions.

General Motors

- General Motors is reducing more than 200,000 metric tons of CO2 per year by switching from coal to natural gas at five steam generating facilities (boiler controls, a low Noxburner and plans for cogeneration are underway at two others). The first of 11 facility energy audits has identified procedural changes and projects saving 19%% of total energy use. GM's commitment also focuses on participation in Green Lights and the energy and waste activities of its suppliers.

DuPont

- DuPont estimates that its action under Climate Wise will reduce greenhouse gas emissions equivalent to 18 million metric tons of CO2 by the year 2000. DuPont's energy efficiency improvements include switching boiler fuels, improving steam balance, decreasing waste heat, and optimizing system performance in aeration blowers. Their actions already produced savings of $31 million in 1995 alone.

Quad/Graphics Inc.

- As a Climate Wise Partner, Quad/Graphics has pledged to work to maintain a 3% annual reduction in energy usage. Annual energy savings from Quad/Graphics' Lomira facilities steam heat recovery efforts in saving 84 billion BTUs, and fuel costs of $236,000. Catalytic converters used on the offset presses are more than 95% efficient and the solvent recovery system in the gravure pressroom is more than 97% efficient. Energy efficiency, recycling, and employee commuting initiatives have been good for business and have reduced energy use per unit of production by over 20% since 1985.

Majestic Metals

- Majestic Metals, Inc., a Denver-based precision sheet metal manufacturer, joined Climate Wise in February 1995. The company estimates savings of more than $40,000 annually through its pollution prevention activities including enhancing insulation, upgrading a process heating system, and developing a cost-effective closed-loop rinse system in their meal pre-paint processing data.

8. NATURAL GAS STAR PROGRAM

Program Accomplishments:

- The Natural Gas STAR Program encourages natural gas companies to adopt cost- effective technologies and practices that reduce emissions of methane (a potent greenhouse gas) throughout production, transmission, and distribution of the gas. Program status:

  - 60 partners representing

    -- over 65% of transmission company pipeline miles
    -- over 30% of distribution company pipeline miles
    -- over 35% of U.S. natural gas production

  - Annual emissions reduction is equivalent of 7 billion pounds of carbon dioxide.

9. VOLUNTARY ALUMINUM INDUSTRY PROGRAM

Program Accomplishments:

- The Voluntary Aluminum Industry Program works with aluminum producers to reduce emissions of PFCs (potent contributors to global warming). Program partners:

  - 12 companies representing 94% of the U.S. primary aluminum production capacity.