

Protecting the Environment and Our Employees

PERFORMANCE

2005

HIGHLIGHTS



INTRODUCTION

More than 35 years ago, the White House and Congress established the U.S. Environmental Protection Agency (EPA) to protect human health and safeguard the natural environment. Such a mandate gives EPA the authority to establish environmental and health-based policies and programs that industry and other Federal agencies must follow. In an effort to lead by example, EPA strives to ensure that its own offices and laboratories operate in a manner that minimizes environmental impacts, fosters environmental stewardship, and protects EPA employees. To meet this goal, the Agency works toward continually improving upon its safety, health, and environmental performance. This report summarizes EPA's accomplishments in these areas for calendar year 2005 and, where applicable, explains what the Agency plans to do in the future to further improve its performance. The report provides information on EPA's efforts to:

- Implement, integrate, and utilize environmental management systems and safety and health management systems;
- Use audits as a tool for achieving optimal safety, health, and environmental performance;
- Reduce energy use and promote the use of renewable energy;
- Ensure that EPA's buildings are safe and that they incorporate sustainable features;
- Promote pollution prevention activities;
- Protect the safety of EPA employees who respond to emergencies and natural disasters; and
- Reduce work-related injuries and illnesses, save lives, and promote employee wellness.

We are proud of the progress we made in 2005 and we look forward to ongoing progress in 2006 that will allow us to continue improving upon our safety, health, and environmental performance.



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Management Systems Pave the Way for Improved Performance



At EPA, we strive to accomplish the Agency's mission in the most effective, safe, and environmentally responsible manner possible. To support this goal, EPA is committed to developing management systems that foster continuous improvement in the way that the Agency carries out its activities. Toward that end, EPA is integrating and utilizing environmental management systems (EMS) and has begun developing safety and health management systems (SHMS).

EMS—EPA Stands Out Among Its Peers

An EMS is a set of management tools that promotes the integration of environmental accountability into all levels of an organization's operational, planning, and management decisions. As such, it provides a framework that enables organizations to reduce their environmental footprint and demonstrate leadership in environmental stewardship. As a benefit to taxpayers, EMS makes good business sense because it has the potential to improve the efficiency of operations, reduce waste, and save money.

Recognizing the benefits associated with EMS, Executive Order 13148 mandated Federal agencies to implement EMS at all appropriate facilities by December 31, 2005. In response, EPA's major offices and laboratories launched aggressive EMS implementation programs. To support them, the Agency created a 12-step EMS implementation framework, established a tracking system to monitor each location's progress, developed guidance and EMS-related training materials, and provided on-site technical support to locations that required assistance. The Agency's commitment has paid off. In fact, EPA succeeded in implementing EMS at all of its major offices and laboratories by the December 31, 2005, deadline—an accomplishment that only 15 percent of the Federal sector was able to achieve.

EPA'S EQUATION FOR SUCCESS

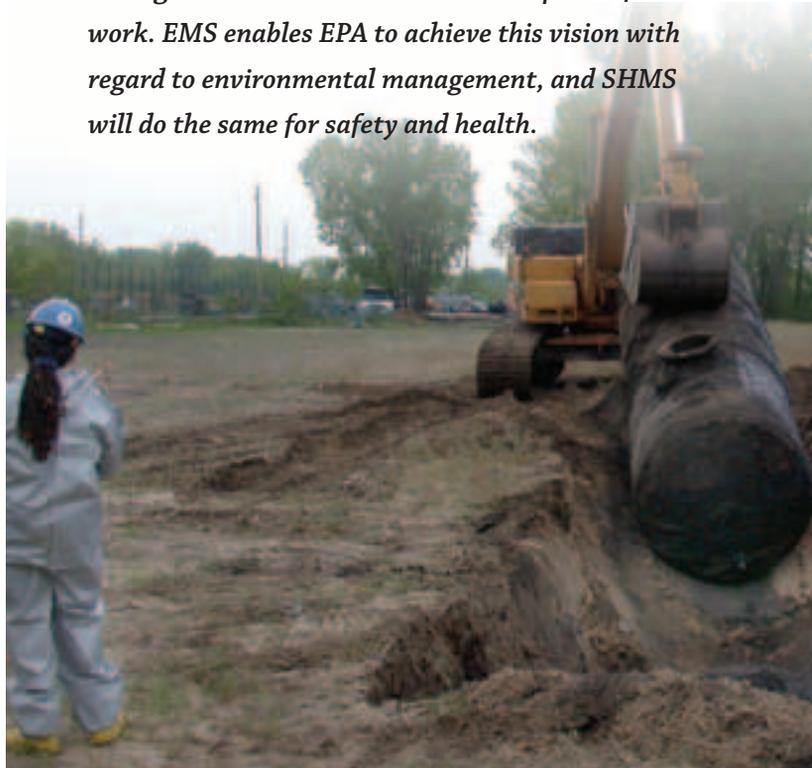
The Agency's position as a leader in the Federal community has attracted recent attention from outside organizations. For example, in the most recent version of the Office of Management and Budget's (OMB's) Environmental Stewardship Scorecard, the section of the scorecard that addresses EPA's EMS implementation effort earned a green rating—the highest rating offered. Moreover, EPA consistently receives high marks on an EMS report card that the Office of the Federal Environmental Executive uses to evaluate progress that is being made toward implementing and integrating EMS throughout the Federal family.

In addition to focusing on EMS implementation, the Agency initiated activities in 2005 to promote the continued use and improvement of established EMS programs. For example, EPA is developing a document that explains how to maintain and improve EMS and how to ensure broad employee participation. Also in 2005, EPA launched an effort to identify Agencywide EMS objectives and targets that (1) capture common environmental priorities identified across the Agency's EMS reporting locations, (2) address regulatory and Executive Order requirements, and (3) encompass Agencywide strategic goals. By implementing Agencywide EMS objectives and targets, EPA will ensure that all of the EMS programs deployed across the Agency are aligned with EPA's broader mission and strategic direction.

EPA will continue to support EMS implementation and post-implementation activities in the coming years. For example, in 2006, the Agency is committed to developing EMS at three new locations that were not included in the original list of EPA's "official EMS reporting locations." EPA also plans to provide training on EMS integration and utilization in 2006 to EPA locations that already have an EMS in place.

EMS + SHMS = Optimal Performance

EPA wants its managers and employees to realize the value of integrating safety, health, and environmental management considerations into all aspects of their work. EMS enables EPA to achieve this vision with regard to environmental management, and SHMS will do the same for safety and health.



EMS REDUCES THE AGENCY'S ENVIRONMENTAL FOOTPRINT

During the EMS implementation process, EPA locations were instructed to examine their operations, identify activities with potentially significant environmental aspects, and set objectives and targets to address those aspects. Some of EPA's facilities have started tracking their progress, and in some cases, the results are impressive. For example, the Region 10 Office set a target to reduce its paper consumption by 15 percent each year. In keeping with this goal, the facility was expected to reduce the number of paper cartons it used from 1,440 to 1,224 between 2004 and 2005, but it surpassed its target and used only 1,015 cartons. As another example, the Region 8 Office identified tailpipe emission reductions as an EMS-related objective. In an effort to meet that objective, the office held numerous videoconferences in 2005 to reduce the need for travel and added a hybrid vehicle to its fleet.

SHMS—Coming Soon to an EPA Facility Near You

Given EPA's commitment to EMS, it should come as no surprise that the Agency has now embraced the idea of implementing SHMS—a framework that integrates safety and health considerations into all levels of a facility's decision-making processes. SHMS promises to improve EPA's safety and health performance, advance EPA's "safety culture," help EPA identify and manage existing and emerging safety risks, and reduce costs associated with employee accidents. EPA expressed its commitment to SHMS in 2005 and announced that it plans to implement SHMS at 35 locations by the end of 2008. To achieve this goal, EPA will launch SHMS at a minimum of four pilot sites (including office and laboratory locations in Region 1 and Region 7) in 2006 and use the experience gained from these pilots to develop formal SHMS implementation guidance.



Audits Help EPA Achieve Optimal Safety, Health, and Environmental Performance

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n a regular basis, industrial hygienists, fire and life safety specialists, and environmental engineers—who support the Agency’s Safety, Health and Environmental Management Division (SHEMD)—visit EPA facilities to evaluate their safety, health, and environmental management (SHEM) performance. The audits serve a dual purpose. First, they determine whether EPA is complying with applicable SHEM-related laws and regulations. Second, they examine whether the Agency’s facilities are adequately promoting environmental stewardship, maintaining safe and healthful workplaces, and implementing best management practices. The audits help EPA identify deficiencies so that they can be resolved, a process that dovetails with the Agency’s management system paradigm.

The Agency’s SHEM Audit and Evaluation Program has been in place since 1988. Under this program, auditors are sent to EPA offices and laboratories once every 3 to 5 years and to research vessels periodically to perform a compliance review and evaluate the maturity of facility management systems. Compliance infractions are documented as “audit findings” and entered into an automated database. The findings are tracked until they are resolved. Local managers are required to develop formal Corrective Action Plans and to track findings to closure.

In 2005, 14 EPA facilities were audited (including four regional offices, three field offices, and seven EPA laboratories). Audit findings were identified during these visits, but the majority of them were considered minor regulatory discrepancies that were unlikely to pose a serious risk to employees or the environment. Also in 2005, EPA launched an initiative to enhance the SHEM Audit and Evaluation Program. The enhancements, which will be completed in 2008, involve the following activities:

Ensuring the rapid closure of open audit findings. Using an integrated approach, in 2005 the Office of Administrative Services (OAS) initiated a campaign to resolve all of the Agency’s backlogged open audit findings. OAS will continue to pursue this goal throughout 2006 and will take steps to ensure that any newly identified findings are addressed expeditiously. For example, an Agencywide system will be launched in 2006 that sends automatic e-mails to senior managers to remind them of the status of their open audit findings and to prompt them to indicate when corrective actions will be completed.



OAS has also established a work group of SHEMD and Facilities Management and Services Division (FMSD) professionals whose objective is to assist facility senior managers and their staff with closing longstanding and/or complex audit findings. Services/support include: negotiating with the U.S. General Services Administration (GSA), providing technical experts, supporting/initiating system design changes, and assisting with resolution of budgeting issues.

Realigning the SHEM Audit Program. In 2006 and 2007, the audit program will transition more fully from a regulatory-based compliance program to a performance-based program. Compliance will remain an integral component of the audit process, but heightened emphasis will be placed on management systems review.

Developing self-assessment tools. Self-assessment tools are being developed for local managers to use. These assessments will augment the formal audits that occur once every 3 to 5 years under the SHEM Audit and Evaluation Program. The tools will be launched throughout 2007 and 2008, at which time performing an annual self-assessment will be considered a mandatory activity at all EPA facilities.

EPA Promotes Energy Efficiency and Green Power



EPA strives to manage its energy use in a manner that both enables and reflects the Agency's mission. It does so by promoting energy conservation at its facilities, assessing and improving the efficiency of its mechanical systems, purchasing green and renewable power, and demonstrating emerging technologies.

EPA's overall energy performance in fiscal year (FY) 2005 was measured against the energy efficiency target established by Executive Order 13123, Greening the Government Through Efficient Energy Management, which requires the Agency to reduce its energy intensity by 20 percent compared to an FY 1990 baseline. Through a combination of green power purchases, commissioning efforts, mechanical system upgrades, and sustainable building design, EPA reduced its energy intensity in FY 2005 by 40 percent compared to FY 1990, far exceeding its goal and earning the Agency a green rating on OMB's Energy Management Scorecard. As shown in the graph on page 7, the reduction was due in large part to the Agency's strong green power purchasing program. (The U.S. Department of Energy's reporting guidelines allow agencies to deduct or "net out" green power purchases from reported energy use).

EPA ANSWERS THE PRESIDENT'S CALL FOR ENERGY CONSERVATION

Enhancing Energy Efficiency at EPA

EPA is constantly working to improve energy performance at all of its offices and laboratories. Below are just a few highlights of what the Agency achieved in this regard in 2005.

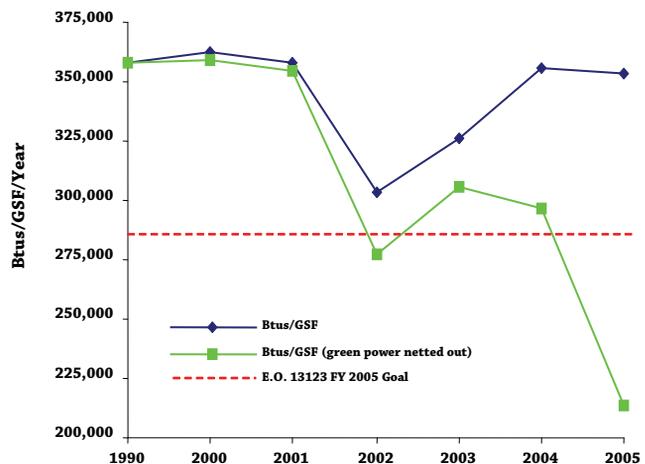
EPA implemented recommissioning projects to evaluate energy performance and implement energy savings efforts at its main laboratory complex in Research Triangle Park (RTP), North Carolina—the Agency's largest energy consumer. In other words, EPA performed an evaluation to ensure that these laboratory building systems are still functioning as originally planned and to identify where periodic operating procedure changes or drifts in control calibrations have affected building mechanical system performance in a previously commissioned building. More specifically, as part of the Laboratory Controls Optimization Project and the Vivarium Controls Optimization Project, EPA made careful adjustments to ventilation control set points in RTP's laboratories and vivariums (animal holding areas), which reduced energy use while ensuring performance and employee safety. These adjustments also reduced overall demands on air handling units (AHUs), which paved the way for implementing a static pressure optimization/reduction test to adjust AHU controls and further improve energy efficiency. Together, these efforts helped reduce the facility's energy use in 2005 by more than 10 percent compared to 2004. Additional savings are expected in 2006. Based on the success of these projects, the Agency plans to initiate similar recommissioning efforts at other EPA laboratories across the country.

EPA completed an energy savings project at its Environmental Research Center in Ada, Oklahoma, which included the installation of a ground-source heat pump (GHP) that uses the Earth's subsurface temperature to heat the facility in the winter and cool the facility in the summer. Thanks to the GHP (which eliminated the laboratory's need for natural gas) and a green power contract signed in May 2005 (which offsets 100 percent of the carbon emissions related to the laboratory's electricity use), the Environmental Research Center has become EPA's first "carbon-neutral" facility.

In June 2005, EPA's Region 9 Laboratory completed several mechanical upgrades that are anticipated to reduce the facility's energy demands by approximately 15 percent. The project, funded by utility savings through an agreement with the building owner, included installation of a natural gas co-generation unit for electricity and hot water; replacement of a single, oversized boiler with two smaller ones; and a heating, ventilation, and air conditioning upgrade.

On September 26, 2005, President Bush issued a memorandum asking Federal agencies to conserve natural gas, electricity, and oil in the wake of Hurricanes Katrina and Rita. EPA offices and laboratories across the country responded by participating in energy-saving activities and developing plans to conserve energy during the ensuing winter months. Facilities reduced electricity and natural gas demands by installing ENERGY STAR® appliances and other energy-efficient products, upgrading mechanical equipment, adjusting heating and cooling set points, and where appropriate, shifting energy-intensive activities to non-peak periods. EPA also curtailed non-essential travel; encouraged car-pooling, mass transit, and telecommuting; and used alternative fuel vehicles to conserve gasoline and diesel fuel.

Energy Intensity at EPA Laboratories



SUPPORTING EMERGING CLEAN FUEL TECHNOLOGY

EPA is helping to advance clean fuel technology as part of both its daily operations and its ongoing research initiatives. In FY 2005, the Agency used 30,000 gallons of soy ester biodiesel fuel at its laboratories in Narragansett, Rhode Island, and Manchester, Washington, and alternative fuel vehicles or other advanced technology vehicles, such as hybrid-electrics, accounted for approximately one-third of EPA's national fleet.



In addition, EPA Headquarters in Washington, D.C., partnered with General Motors (GM) to demonstrate emerging fuel cell technology. It did so by leasing a GM HydroGen3 vehicle for a 6-month trial and evaluating fueling and operations challenges associated with such vehicles. EPA's National Vehicle and Fuel Emission Laboratory in Ann Arbor, Michigan, is testing the fuel economy and emissions of fuel cell vehicles in an effort to accelerate the deployment of commercial fuel cell technologies.

In April 2005, the Sam Nunn Atlanta Federal Center, in which EPA's Region 4 Office is the main tenant, was awarded an ENERGY STAR® label for having achieved energy performance that ranks it in the top 25 percent of all office buildings. The achievement was the result of a two-year joint effort between EPA, the U.S. Department of Energy, and the U.S. General Services Administration (GSA). The project included installation of lighting occupancy sensors and energy-efficient power strips, as well as improvements to building energy controls. These efforts resulted in a 12 percent decrease in energy consumption and utility cost savings of approximately \$200,000.

EPA installed a Web-based comprehensive energy management and real-time metering system at two facilities within its Research Triangle Park complex and installed an advanced metering system at the National Enforcement Investigation Center in Denver, Colorado.

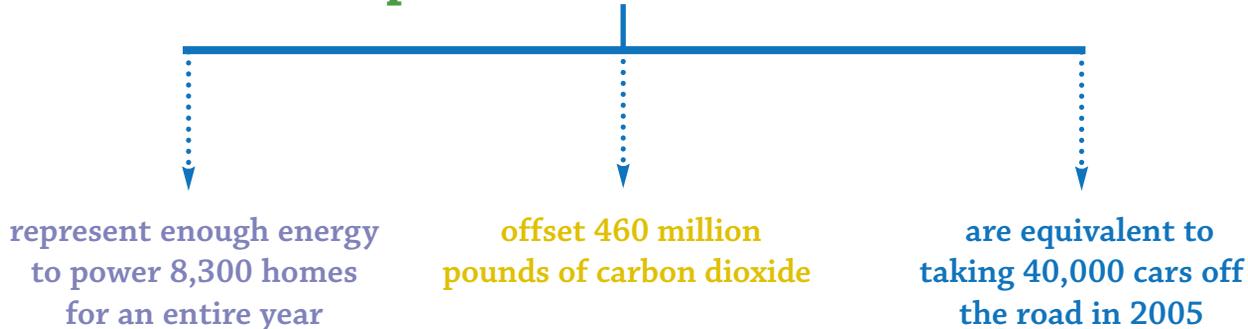
Green Power Purchases and Demonstrations

EPA's renewable energy portfolio has grown tremendously since the Agency first started purchasing green power for its Region 9 Laboratory in 1999. Since then, EPA has continued to support the development of renewable energy sources, such as wind, geothermal, biomass, and landfill gas, by arranging contracts either to buy direct electricity from these sources or to purchase renewable energy certificates (RECs). (The latter are tradable credits that offset the emissions associated with traditional electricity sources by supporting wind farms, biomass, and landfill gas generation.)

In FY 2005, EPA's green power contracts covered 30 offices and laboratories around the country, including new contracts for eight facilities and replacement or renewal contracts for nine facilities.



EPA's green power purchases in FY 2005:



In all, the Agency purchased 225 million kilowatt hours of green power in FY 2005, a figure equivalent to nearly 76 percent of EPA's total annual electricity use at all of its offices and laboratories. In addition to its green power contracts, EPA installed renewable energy technology at some of its facilities in 2005, including a rooftop solar array at its laboratory in Corvallis, Oregon (pictured below).

Future Energy Management Goals

On August 8, 2005, President Bush signed the Energy Policy Act of 2005 (EPA 2005), which included new mandatory energy efficiency goals for Federal facilities. EPA 2005 requires that EPA and other Federal agencies reduce their energy intensity by 2 percent each year (compared to a FY 2003 baseline) beginning in FY 2006 and continuing through FY 2015. To meet these reduction targets, the Agency developed the "ConserveE" program, an energy conservation initiative to reduce energy use at EPA facilities. Launched in late 2005, the ConserveE program involves short, medium, and long-term actions to improve the Agency's energy performance, such as operation and maintenance best practices, energy audits, recommissioning, mechanical system upgrades, and long-range mechanical systems master planning.



In addition to enhancing energy reporting, measurement, and efficiency, EPA also plans to expand its green power portfolio, ultimately seeking to become the first Federal agency to reach 100 percent green power. By supporting renewable energy sources and implementing extensive energy conservation projects, EPA plans to continue to show leadership among Federal agencies in energy management in 2006.

Sustainable and Safe Buildings Showcase EPA Priorities



EPA is committed to ensuring that its buildings minimize the amount of resources used and that they serve as safe, healthy, and productive work environments. To do this, the Agency proactively incorporates environmentally sustainable features, such as green building materials, water-saving devices, and stormwater management plans, and addresses building-related safety and health concerns.

Embracing Sustainability—“LEEDing” By Example

The U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) rating system—a voluntary, consensus-based national standard for developing high-performance, sustainable buildings—provides a framework for meeting sustainability goals. There is no Federal mandate stating that agencies must achieve LEED ratings, but for several years, EPA has required its newly constructed facilities to achieve a minimum of LEED Silver certification. Meeting that goal, the National Computer Center in Research Triangle Park, North Carolina, achieved LEED Silver certification in January 2005. EPA’s commitment to the LEED program continues to strengthen, and in 2006, the Agency plans to elevate its expectations by indicating that all new construction projects must meet the LEED Gold certification standard.

EPA’s National Computer Center in Research Triangle Park, North Carolina, is LEED™ Silver Certified.





Getting It Right Upfront

*EPA's new offices in
Arlington, Virginia.*

For new construction projects, such as EPA's new Potomac Yard Office building in Virginia, the best way to ensure that environmentally sustainable features and sound safety and health practices take root is to start with the acquisition phase and work with partners, such as GSA, and building developers throughout design and construction. To accomplish this, EPA incorporates green features and environmental provisions as a requirement in the solicitation for offers (SFOs) for all of its new and renovated facilities. For example, the Potomac Yard facility's SFO requested that energy efficiency, water efficiency, and environmentally preferable materials be accounted for in facility design.

EPA has made a concerted effort to address safety and health at the Potomac Yard facility. For example, early in the design phase, EPA reviewed facility plans to determine whether any of the design features might create safety and health hazards. In addition, all of the Material Safety Data Sheets for chemicals that were used in the facility's construction materials (such as paints, caulks, and sealants) were reviewed to confirm that they met low-volatile organic compound requirements. Also, the builder was required to submit an Indoor Air Quality (IAQ) Management Plan and EPA ensured that an Integrated Pest Management Plan was developed to promote non-toxic pest control methods whenever possible. Green cleaning products and services were also coordinated in accordance with safety and health regulations.

EPA'S WATER CONSERVATION EFFORTS

Water conservation initiatives are underway at a variety of EPA locations. For example, EPA's laboratory in Corvallis, Oregon, achieved significant water savings in 2005 by replacing an air conditioning unit that was cooled by a continuous flow of water with a unit that uses recirculated chilled glycol for cooling, a change that will save the facility more than 3 million gallons of water per year. As another example, at EPA's Region 10 Laboratory, employee-driven suggestions have led to tremendous water and cost savings. At that location, employees noticed that the facility's autoclave stand-by function, which allows the equipment to temporarily shut down while not in use, was not operational. Autoclaves—devices that use steam to sterilize equipment and inactivate bacteria, viruses, fungi, and spores—typically use a tremendous amount of water and energy. By simply using the stand-by function, the laboratory will save nearly 60,000 gallons of water per year. Inspired by these savings, the facility installed water reducing valves on each autoclave, reducing the amount of cooling water each autoclave uses by 50 to 90 percent.

At EPA's new Region 8 Office, which is under construction in Denver, Colorado, a Safety and Health Move Action Team accounted for IAQ considerations when making recommendations about which building materials to use and addressed ergonomic-related issues when recommending which type of furniture to purchase.

Fostering Smart Stormwater Management

EPA also demonstrated its commitment to green building principles in 2005 by embracing environmentally sound stormwater management strategies. For example, EPA's new Potomac Yard facility and the new Region 8 Office both feature green roofs that consist of vegetation planted over a waterproof membrane. These roofs will help manage stormwater, save energy, and provide aesthetic benefits. While the Potomac Yard facility contains a small green roof, the Region 8 facility—currently under construction—will include a larger, more elaborate green roof. This three-level green roof will be added to the upper levels of the building incorporating an extensive planting scheme consisting of grasses, perennials, and groundcovers selected in accordance with the U.S. Department of Agriculture's hardiness zone classification. The roof is estimated to reduce stormwater runoff by nearly 27 percent.



EPA's new Region 8 Office in Denver, Colorado, will include a green roof.

EPA is also demonstrating an innovative low impact development (LID) project at its Federal Triangle Headquarters facility in Washington, D.C. This multi-phased project—conducted in collaboration with GSA—aims to reduce the volume and pollution levels of stormwater runoff as well as demonstrate that sustainable design and LID are suitable for use in high-profile urban sites that have rigorous aesthetic design requirements. The project includes construction of rain gardens or bio-retention cells, porous paving, native species planting, and a cistern to capture rainwater runoff. Construction of this project began in January 2005.

EPA Strengthens Its Pollution Prevention Initiatives

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s an agency that employs nearly 18,000 people and supports a variety of office, laboratory, and field activities, EPA has the potential to generate substantial pollution and waste. In 2005, to minimize its environmental impact, the Agency purchased environmentally preferable products, reduced its use of materials whenever possible, and promoted reuse and recycling practices.

Greening the Agency's Acquisition Practices

From large acquisitions to micro-purchases, EPA has taken the lead among Federal agencies in greening its acquisitions. In May 2005, EPA stated that all of the Agency's purchase card holders must use EPA's Blanket Purchase Agreement (BPA) for green office supplies. The BPA provides a one-stop online shop for office supplies and offers easy access to more than 1,000 items that fulfill the Federal Comprehensive Procurement Guidelines for recycled-content and other environmentally preferable attributes. By using the BPA, the Agency has already realized an increase in the number of remanufactured toner cartridges purchased and an increase in the amount of sanitary paper products purchased with recovered materials.

While the existing BPA does not currently cover electronic products, efforts are underway to ensure that a greater percentage of the Agency's newly purchased electronics include environmentally preferable attributes (see below for details). In addition, EPA plans to expand its affirmative procurement program to include ENERGY STAR® products, alternative fuel vehicles, chemicals, and other purchase areas in 2006. The Agency also plans to publish purchasing guidelines on green procurement for all Agency purchasers in 2006.



EPA Answers the Federal Electronics Challenge



Computer monitors can be recycled for their components or safely disposed of through the READ contract.

EPA is committed to mitigating the environmental impact of its electronic products, such as laptops, desktop computers, printers, and servers made with components that affect the environment throughout their life cycles. The Agency's commitment to this endeavor was confirmed when EPA signed a Memorandum of Understanding entitled *Promoting Sustainable Environmental Stewardship of Federal Electronic Assets* on November 15, 2004. Additionally, throughout 2005, the Agency actively participated in the Federal Electronics Challenge (FEC), a voluntary partnership program that encourages Federal agencies to purchase greener electronic products, reduce the amount of energy consumed by electronic products while they are in use, and manage obsolete electronics in an environmentally safe way. In fact, by the close of 2005, 17 of EPA's targeted organizations had already signed on to the FEC.

During 2005, EPA made an effort to purchase electronic equipment that contains fewer toxic components and is equipped with energy conservation settings and designed for easier end-of-life recycling. Toward that end, EPA began incorporating language requiring these attributes into its electronics acquisition contracts, and in 2006, EPA plans to develop a green BPA for desktop and laptop computers. These items will soon be required to feature the sustainable attributes found in the Electronic Product Environmental Assessment Tool (EPEAT) in order to be sold to EPA through the BPA. Also in 2006, EPA plans to extend the "refresh cycle," or length of time before electronic items are replaced, as well as ensure that the "power down" function and other ENERGY STAR® features are enabled on employees' personal computers and monitors.

As far as managing electronics that the Agency no longer needs, EPA strives to reuse or recycle these products. For example, in an effort to give a second life to electronics that are still in good condition, EPA donates many of them to Computers for Learning, a program that redistributes surplus government computers and related equipment to schools. In fact, in 2005, EPA offices donated 2,061 pieces of electronic equipment, such as desktops, laptops, monitors, keyboards and printers, to schools across the United States.

When equipment is no longer reusable, EPA relies upon its Recycling Electronics and Asset Disposition (READ) contract to ensure that each piece is properly recycled. READ is a government-wide recycling contract that enables Federal agencies to properly manage excess or obsolete electronic equipment in an environmentally responsible manner, whether by reuse, recycling, or safe disposal for toxic components. To date, EPA has processed more than 300,000 pounds of EPA's electronic equipment through the READ contract.

EPA Supports Innovative Recycling Efforts

In 2005, EPA conducted recycling assessments at three of its regional offices to examine each facility's recycling practices, identify ways to enhance the amount of recycling that occurs, and identify best practices that can be shared with the entire Agency. The assessments revealed several innovative and effective ways that EPA's regional offices are boosting recycling efforts.

The Region 1 Office has upgraded its computer software to enable paper-free faxing. This system allows employees to send faxes from their computers rather than having to print paper copies first, and allows them to view incoming faxes as e-mail attachments. The office has also installed new "eScan" copy machines. These machines convert scanned paper documents into electronic files, which can then be distributed throughout the office without wasting paper. Region 1, which has an office recycling rate of 63.6 percent, also holds an annual office "Clean-Up Day" to encourage recycling and reuse of office equipment and supplies.

The Region 2 Office, working with its local READ contractor, recycled 668 computers, 330 monitors, three pallets of printers, and two bins of keyboards, plus other assorted office electronic equipment in October 2005. In addition, the office accepted books and office supply materials from a Region 2 library that closed earlier in the year, preventing the supplies from being discarded in the trash. The Region 2 Office added the books to its own library and donated the extra office supply materials to other organizations instead of throwing them away.

The Region 5 Office has implemented a unique closed-loop paper recycling system that turns used office paper into tissues and towels for the office's facilities. Currently, the office recycles 81 percent of all mixed paper it generates. In addition to paper recycling, the office recycles 98 percent of all cans and 95 percent of all bottles generated in the building.



CUTTING BACK ON CHEMICALS

Executive Order 13148 challenges Federal agencies to reduce the amount of chemicals they use and the quantity of hazardous waste they generate. To meet this challenge, EPA laboratories are strengthening their chemical management systems and green-ing their analytical procedures. For example, in 2005, the Agency's laboratories continued implementing chemical management software that improves chemical tracking, reduces the likelihood of chemical purchase duplications, and encourages personnel to use up (or "adopt out") existing chemical stocks before the chemicals exceed their useful shelf lives and become hazardous waste.

To improve analytical procedures, some EPA laboratories purchased new equipment in 2005 that will allow them to reduce the amount of solvent or acid they use to support sample analysis. Others continued to refine their analytical methodologies. For example, late in 2005, the Region 5 Laboratory developed an analytical method that reduces the amount of sulfuric acid required per sample. Also in 2005, the Region 10 Laboratory worked on improving its micro-extraction technique, a change that is expected to result in significant reductions in methylene chloride use.

EPA Keeps Its Responders Safe During Emergencies and Natural Disasters



EPA plays a vital role in helping the nation respond to natural and man-made emergencies and disasters. For example, in 2005, when Hurricanes Katrina and Rita ravaged the Gulf Coast, the Agency sent more than 1,100 EPA employees (such as those pictured above) to the region to assist in response and cleanup efforts. These employees, who came from all over the country, performed a variety of tasks, while avoiding potential safety and health hazards.

For example, while in the field, EPA employees conducted the following:

- Facilitated the removal and management of millions of cubic yards of debris;
- Disposed of more than 3.2 million unsecured or abandoned containers of potentially hazardous wastes;
- Collected samples of floodwater, sediment, soil, surface water, and groundwater;
- Delivered emergency supplies to water and wastewater utilities;
- Assisted with community outreach; and
- Handled oil and hazardous substance spills along the Gulf Coast, including a cleanup effort at the Murphy Oil refinery that involved a 1-million gallon release of mixed crude oil.

While performing these activities, EPA employees had the potential to be exposed to harmful chemicals or biological agents. Therefore, the Agency mobilized quickly to ensure that its employees would be adequately protected against such risks. For example, within days of Katrina's landfall, EPA had established a mechanism with Federal Occupational Health (FOH) to ensure that deployed employees could obtain tetanus/diphtheria, hepatitis A, and hepatitis B vaccines. EPA also posted important hurricane-response safety and health information on its intranet site, including (1) health advisories; (2) fact sheets explaining how to protect oneself from exposure to water-borne illnesses, infectious diseases, and mold; and (3) training materials that the National Institute of Environmental Health Science produced under its Hurricane Response Initiative.

Additionally, EPA posted job hazard analyses on its intranet site that described tasks that employees might encounter (e.g., removing debris from hurricane-damaged areas) and explained how to reduce the hazards associated with these tasks. EPA also developed a pre- and post-deployment medical questionnaire for employees who volunteered to go to the Gulf Region even though their normal job descriptions did not include field work.

Hurricanes Katrina and Rita served as a solemn reminder of how important it is for the Agency to maintain a mission-ready workforce, meaning that individuals from different EPA Regions should share the same level of safety and health preparedness and be ready to respond to national disasters on a moment's notice. This realization is hardly new to the Agency. In fact, one month before Hurricane Katrina hit, EPA announced the availability of its *Emergency Responder Health and Safety Manual*, a document that promotes consistency in (1) the way EPA emergency responders are trained and monitored, and (2) the type of protective equipment they use



Murphy Oil refinery spill.



Employees conduct sampling on Lake Ponchartrain.



An EPA employee monitors hazardous waste in Jefferson Parish, Louisiana.

in the field. The manual consists of multiple chapters, each of which addresses a specific health and safety topic and outlines steps that must be taken to protect EPA's emergency responders from job-related accidents, injuries, and exposures to hazardous materials. The first three chapters of the manual were released in 2005: they address radiation safety, medical surveillance, and respiratory protection. Seven additional chapters have been slated for development by the end of 2008.



An EPA employee at the National Enforcement Investigation Center in Denver, Colorado, performs field work.

EPA Takes Steps to Reduce Injuries, Save Lives, and Promote Employee Wellness

Fostering healthful working conditions and promoting employee wellness makes sense: not only is it the right thing to do, but it also makes good business sense since a happier, healthier workforce is typically a more productive one. While EPA has always placed a high premium on safeguarding employee health, the Agency ramped up these efforts in 2005 by (1) committing to reduce its injury and illness rate, (2) promoting Automated External Defibrillator (AED) access and training, and (3) implementing an employee Wellness Pilot Program.

Preventing Injuries and Illnesses

Compared to other Federal agencies, EPA has low injury and illness rates, with relatively few employees injured on the job. Nevertheless, EPA believes that *any* employee injury is one too many and that it is important to bring the injury and illness rate as close to zero as possible. In 2005, EPA identified injury and illness rate reduction as an objective that it must pursue. This effort involves enhancing EPA's existing injury and illness data collection system, identifying the Agency's top hazards, promoting operational changes, and launching an Injury and Illness Prevention Program Awareness Campaign. The goals of the prevention program are to (1) educate employees about the importance of reporting injuries and work-related illnesses, (2) teach them how to take preventative measures, and (3) ensure that they are aware of EPA's emergency medical procedures.



Creating Life Savers



One of the most dramatic ways that EPA can influence an employee's well being is to provide access to AEDs—devices that can save the lives of cardiac arrest victims and minimize the severity of physiological injuries caused by cardiac arrest. In 2005, EPA Headquarters employees were given the opportunity to attend an 8-hour instructor-led AED/CPR class to become certified as trained first responders. This class was offered 10 times across the Washington, D.C., metro area in 2005, and by the end of the year, about 300 Headquarters employees had become certified. AED training was also offered in 2005 at the majority of EPA's main offices and laboratories. EPA will expand its AED Program in 2006 and increase the number of employees who are certified as first responders. Toward this end,

the Agency has agreed to deliver additional AED/CPR classes at EPA Headquarters locations in 2006 and is in the process of assessing a variety of training schemes and learning strategies in order to maximize the number of employees that can be trained. Also in 2006, EPA will analyze the AED programs deployed at individual EPA locations across the Agency to determine whether it would be beneficial to develop Agencywide guidelines for operating and optimizing an AED Program.

A Holistic Approach to Health

EPA encourages its employees to engage in personal fitness and weight management programs and to make healthy lifestyle choices. In 2005, EPA piloted a Wellness Program at six EPA locations across the Agency. Pilot participants had access to a confidential employee health-assessment database and an interactive Web site that offered health information. In addition, lifestyle counseling was made available and participants were invited to participate in an 8-week nutrition and weight management program called "Lighten Up! With FOH" (Federal Occupational Health). Health promotion activities, such as "Annual Walks to Wellness," were also included as components of the pilot program. The activities undertaken at the six pilot sites were not the only wellness-related efforts that took place across EPA in 2005. In fact, an additional 21 EPA locations were involved in activities that promote healthier lifestyles, such as providing access to fitness centers and/or sponsoring educational series on health topics. In 2006, EPA will evaluate the results from its Wellness Pilot Program, assess other ongoing wellness initiatives, and use the information collected to determine if launching a formal Wellness Program across the entire Agency makes sense.

ACKNOWLEDGEMENTS

EPA's Office of Administration and Resources Management would like to acknowledge the following staff for their contributions to this report and their tireless commitment to improving the Agency's safety, health, and environmental performance:

- Assistant and Regional Administrators;
- Safety, health, environmental management, real estate, architecture, engineering, and sustainable facilities personnel;
- Energy, facility, fleet, and laboratory managers;
- Pollution prevention, EMS, and recycling coordinators; and
- Purchasing and contract officials.





United States
Environmental Protection Agency
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Washington, DC 20460
www.epa.gov

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EPA200-R-06-001
October 2006

