

Closing the  
Circle Award  
Categories

2-3

Environmental  
Management  
Systems

4-6

Waste/  
Pollution  
Prevention

7-10

Green  
Purchasing

11-12

Sustainable  
Design/Green  
Building

13-14

Alternative  
Fuel/Fuel  
Conservation

15-17

Recycling

18-23

# Closing the Circle News

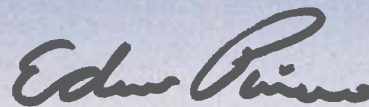
In his Earth Day 2006 speech, President Bush said that we all have a responsibility to be good stewards of the environment to benefit the quality of life of the American people. This year, as the price of oil continues to rise, stewardship and conservation of resources are more important than ever. The Federal government continues to promote stewardship not only in its research and development programs, but in the day-to-day operations of its facilities.

For more than a decade, the Closing the Circle Awards have celebrated Federal facilities and individuals for excellence in reducing their use of toxic and hazardous chemicals, eliminating waste, recycling, and purchasing of a variety of products with energy and environmental attributes. As the scope of Federal stewardship activities expanded, we expanded the awards to include the implementation of environmental management systems, sustainable design of Federal buildings, the use of alternative fuel vehicles and alternative fuels, and reduction in petroleum use. This year, we also focused the Purchasing category on the use of biobased products, as part of our efforts to work with the U.S. Department of Agriculture to create and sustain markets for products made with biobased feedstocks.

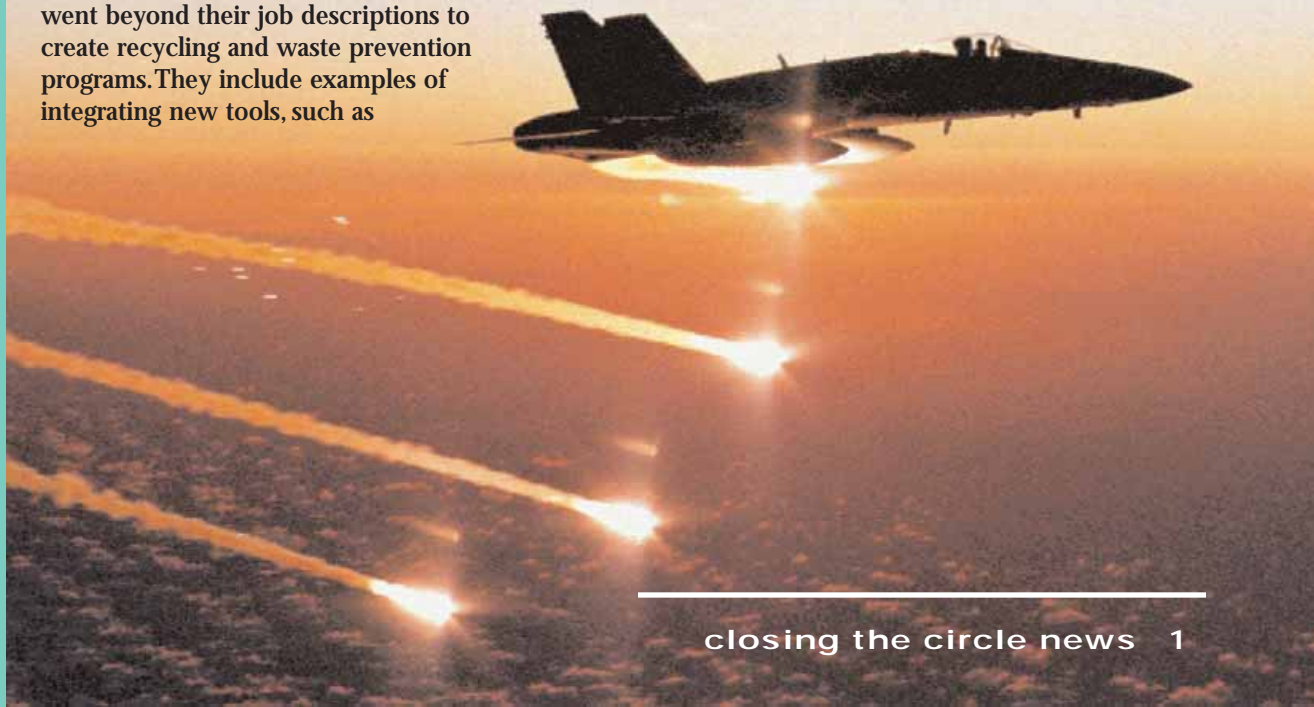
In this edition of Closing the Circle News, we are pleased to share with you the 16 winners of this year's Closing the Circle Awards. They include facilities that won a Closing the Circle Award in the past and have now expanded their award-winning programs or taken on new challenges. They include individuals who went beyond their job descriptions to create recycling and waste prevention programs. They include examples of integrating new tools, such as

environmental management systems, with more established tools, such as pollution prevention opportunity assessments to reduce chemical usage and waste, save money, and create a safer workplace as well as reduced risks to the surrounding environment. They also show the benefits of partnerships between program areas on a facility, with other Federal facilities in a region, with concessionaires, and between Federal facilities and local communities. Most of all, they show that by making environmental considerations a part of everyday decisions, they can conserve resources, protect the environment, save money, and improve their mission operations.

We dedicate this issue to the award winners, and in essence why we give the awards in the first place, for two fundamental reasons. One is to rightfully recognize and reward great performance. Second, and in the long run probably even more beneficial than recognizing performance, is that the awards process provides an opportunity to share with our peers and stakeholders innovative approaches to environmental stewardship. The hope is that others will emulate the pioneers represented in the winners. We trust that you will find these stories inspiring, informative, and maybe even a bit of a challenge to strive to win next year! ■



Ed Piñero  
Federal Environmental Executive



## EMS

**E**nvironmental management systems (EMS) are a systematic approach to ensuring that an organization's environmental priorities and interests are incorporated into operational, planning, and management decisions. This category recognizes the most effective and innovative programs to implement EMSs at Federal facilities in accordance with E.O. 13148. Implementation of Facility level EMS includes measurable environmental goals, objectives, and targets that are reviewed and updated as appropriate. The systems must also include a compliance component. This category also recognizes the use of quantitative or qualitative consideration of the full range (cradle to grave) of environmental costs and impacts of certain activities or procurement. ■

## Waste/ Pollution Prevention

**W**aste prevention involves altering the design, manufacture, purchase, or use of products and materials to reduce the amount and toxicity of what gets disposed. It is sometimes called source reduction because it reduces or eliminates pollution at the source. This category recognizes source reduction practices related to the generation of non-hazardous solid wastes or hazardous wastes or pollution from a Federal facility through any change in the design, manufacturing, or use/reuse of materials or products; and/or the amount of toxicity in waste materials before recycling, reuse, treatment or disposal. ■

## Green Purchasing

**T**he Federal green purchasing program gives preference to products which are made with recycled content, energy efficient, made with biobased content, or are environmentally preferable. It also includes the purchasing of alternative fuel vehicles and alternative fuels. This year the Green Purchasing category focuses on biobased products, the newest component of the Federal program. This is to reward trailblazers and leaders in biobased product use and purchasing. It recognizes how the agency, facility, or individual started to purchase biobased products through pilot projects, product testing, education and outreach to facility staff, or development of solicitation or contract language. ■

## Sustainable Design/Green Building

**B**uilding sustainably is the practice of designing, constructing, operating, maintaining, and removing buildings in ways that conserve resources, reduce pollution, increase energy efficiency, and improve indoor air quality. Owing nearly 500,000 buildings, the Federal government has a tremendous opportunity to reduce energy and environmental impacts. This category recognizes the most innovative Federal government sustainable design and green building projects. It includes all facets of a project's life cycle, that is, project design, energy efficiency, materials usage, building operations, and end of use issues. It also recognizes the cost effective use of innovative techniques and solutions that utilize sustainable design principles in the planning, construction, and operation of Federal facilities. ■

## Alternative Fuel/Fuel Conservation in Transportation

**W**ith a very large fleet of automobiles, SUVs, and heavy trucks and buses, the Federal government can lead the way in increasing the use of alternative fuel vehicles and alternative fuels and reducing petroleum consumption. This is the second year this category recognizes programs, practices and procedures implemented in a Federal fleet that result in significant alternative fuel use and fuel conservation measures in transportation. This includes establishment of new alternative fuel infrastructure; methods for encouraging the use of alternative fuels; ride sharing programs; increased vehicle usage efficiency programs; hybrid vehicle or NEV acquisition and use; or any other methods your fleet uses to decrease its petroleum consumption. ■

## Recycling

**I**t is Federal policy to recycle to reduce waste and conserve resources. This category recognizes recycling activities – including collection, separation, and processing – by which products or other materials are recovered from the waste stream for use in the manufacture of new products. It also recognizes programs that have an internal education component and/or a public outreach component designed to promote recycling at the site, facility, or operation or to promote partnerships with the surrounding community. ■

## Robins AFB Environmental Management Systems Team: Environmental Management for the Future

Robins AFB, GA

**R**obins Air Force Base (AFB) is the home of the Warner Robins Air Logistics Center (WR-ALC). Employing a workforce of more than 25,000 personnel, it is the largest industrial complex in Georgia. The base has incredible diversity in missions, ranging from operational flying wings to specialized support services. To complement these responsibilities, Robins AFB has adopted an innovative and evolving Environmental Management System (EMS) that focuses on retaining an environmentally sustainable “green” base for the future. The EMS structure allows fluid information exchange across programs enabling efficient management of base-wide compliance; it is designed to keep the base and public informed about EMS activities, serve as a document control point, and provide a location for information exchange and feedback. The site also includes the Robins AFB EMS General Awareness Training, which was made web-based for easy access for all personnel.

Robins AFB integrated safety and occupational health principles into its

EMS. Robins has an ESOH Integration team chaired by ALC Chief of Staff, including members such as the Chief of Environmental management, Chief of Robins Air Logistics Center Safety, Chief of Bioenvironmental Engineering, and other key program and element leaders. Working in conjunction with the already functional Environmental Protection Committee (EPC), this team takes on responsibilities such as hazardous waste training, spill procedures, BioSurvey requirements, air quality inspections, material licensing, and much more.

The Compliance Site Inventory (CSI) Database prioritizes the various objectives and environmental impacts to determine priorities for improvement. Selected objectives target reduction in air emissions, hazardous waste, ozone depleting substances, and solid waste. Therefore, environmental achievements include: a 94 percent reduction in Toxic Release Inventory (TRI) methylene chloride emissions from new depainting technology, installing revolutionary propane fuel cells, and opening a compost facility on

base where approximately 1,500 tons per year are composted and used for all landscaping base-wide.

Robins is greening the design for new processes and facilities. Environmental cost benefit analyses and life cycle assessments start in the design phase. For example, the new Large Aircraft Corrosion Control facility was designed to minimize environmental impact during both construction and operation. Ninety-nine percent of the construction waste will be recycled or reused, resulting in \$2.4 million savings in disposal cost. It is designed to recirculate internal ambient air to reduce operating costs by approximately \$800,000 per year and reduce maintenance costs by approximately \$150,000 per year. Volatile Organic Compounds (VOC) will be reduced, 90 percent – 100 percent, by utilizing plastic media blast technology to depaint aircrafts; in C-5 corrosion operations alone, this will result in a reduction of more than eleven tons of VOC emissions. Through information sharing with GA EPD Pollution Prevention Division and > > >



>>> Lockheed Martin, new paint technologies are being installed, reducing paint consumption by approximately 40 percent. C-130 operations alone will reduce paint

usage by over 1800 gallons per year.

Robin's AFB set a goal to have all new construction certified to the U.S. Green Building Council's Leadership in Energy and Environmental Design

(LEED) criteria. The Base Visitor's Center was completed as a successful LEED certified construction in August 2005.

Another fundamental part of the Robins AFB EMS is supporting the base environmental education and awareness programs. Environmental Management partnered with the Base Education Office to provide local environmental awareness training for all newcomers. Robins AFB is also highly involved in the community through participation in a number of outreach programs. These programs range from illustrative newspaper articles, informative museum displays, diverse educational events, and participation on community boards and development committees. Robins AFB takes the opportunity to lead by example and to serve as a good steward to the community while achieving environmental excellence through continual basewide EMS integration. For further information, please contact Terri Thirlaway at 468-926-1197 or [terri.thirlaway@robins.af.mil](mailto:terri.thirlaway@robins.af.mil). ■

## US Mint Environmental Management Systems Team: EMS Program at US Mint

Washington DC

**T**he U.S. Mint aims to include environmental considerations in all business decisions as well as honoring social responsibilities in their communities. In 2002, the U.S. Mint developed an EMS Reference Manual and in 2003 conducted training of all environmental staff, supervisors and managers on EMS and ISO 14001 standards and their requirements.

In 1998, the United States Mint created an Environmental Management System. Within the EMS, environmental staff were appointed, Pollution Prevention and Waste Management Plans were developed, a Self-Inspection Program was implemented, and procedures were developed to meet the requirements of the National Environmental Policy Act. The U.S. Mint's EMS framework was derived from the ISO 14002: 2004, Standard.

The Mint's Denver, Philadelphia, and West Point facilities lead the way in EMS implementation and received ISO 14001 certification in 2005. The Philadelphia Mint has both ISO 14001 registration as well as registration in the OSHA Voluntary Protection Program. In 2001, the Philadelphia Mint replaced the use of iron and lime in removing metals from wastewater process to an organic polymer. The

new treatment process reduced the generation of solid waste by 85 percent. Even though the polymer was more expensive than iron and lime, the avoided land disposal costs balanced the expense. The Mint has succeeded in reducing hazardous waste from 50,000 pounds per year to 4,700 pounds per year over the past three years. It installed three catalytic oxidizers and tested them for carbon monoxide (CO) emissions. CO emissions from gas generators have been reduced from 23 tons per year to just two tons through the installation of catalytic oxidizers. The Mint designed a Microsoft Access database that lists all the chemical products used in the plant, summarizes key hazard information, and provides a hyperlink for each product. The database currently covers 54 designated workplaces and 1,450 records.

The Denver Mint also has made considerable strides in EMS implementation. The Mint established a hazardous material pharmacy in 2002 to centrally manage chemicals for the facility. Lead-free ammunition was introduced to the Mint police firearm training range. In FY 2005, the Denver Mint recycled 12 tons of paper and corrugated containers and 270

tons of scrap metal. Approximately 10,000 gallons of used oil a year is sent to a recycling facility. They have also reduced oil consumption in the past five years due to coining presses, with usage going from 5,000 gallons a year in 2000 to less than 1,000 gallons a year in 2004. In addition, the Denver Mint purchases \$30,000 a year in renewable wind power, which reduces its annual estimated carbon emissions by 250 metric tons.

The West Point Mint began renovating its facility in 2000. This renovation included new energy efficient lighting and HVAC systems, occupancy sensors, and removal of asbestos and lead-based paint. In 2004, the Mint recycled 95 percent of its recyclables. The Mint recycles 95 percent of all batteries, 100 percent of all fluorescent bulbs, as well as 100 percent of computers. The West Point Mint reduced its water consumption by 70 percent by updating its blank burnishing, rinsing, and drying operation. In addition to these dramatic reductions, the Mint has completely discontinued the use of Class 1 and 1 Ozone Depleting Substances.

For more information contact Christopher Grubach at 202-354-7413. ■

## Crane Army Ammunition Activity Pollution Prevention Team: Reuse of MJU Decoy Flares

Crane, IN

**P**reventing waste and saving taxpayer dollars while managing munitions? Crane Army Ammunition (CAAA) has once again shown that it can be done. CAAA is located in southern Indiana. It provides munitions logistics support to joint war-fighters and jointly produces MJU decoy flares with the Naval Surface Warfare Center, Crane. CAAA's primary mission is life cycle management of munitions, including manufacturing, load and assembly, supply depot operations, renovation, maintenance and demilitarization. CAAA aims to reduce pollution through source reduction and recycling, including opportunities in demilitarization operations. The demilitarization process removes military characteristics from unused munitions that are unsuitable for continued storage or excess. CAAA finds ways to recycle or reuse materials from the munitions instead of having them burned or detonated. Crane conducts Pollution Prevention Opportunity Assessments in order to achieve this goal. A successful P2 Team is the MJU-32/B and MJU-38/B Decoy Flare Team.

Decoy flares are used as countermeasures for aircraft under attack by heat-seeking missiles. The manufacture of flare decoys involves assembling highly explosive and unstable materials. Approximately 200,000 of the MJU-32/B and 38/B decoy flares were defective because moisture trapped within the flare case caused the chemicals to oxidize. Regular demilitarization costs for burning the units would have cost \$580,000. The Decoy Flare Team, however, started a new process, which not only reduced these procurement, production, and disposal costs, but reduced the use of hazardous materials, hazardous air pollutant

emissions, and improving the overall waste diversion rate.

This new process involves disassembling the individual MJU units and removing the MTV grain assembly, removing the protective foil covering the grain, removing the defective igniter, drilling the opposite end of the grain, installing a new igniter, oven drying the new MTV Grain Assembly, and then installing the assembly into a new case and end cap. This highly specific process was adopted by private industry in FY 2005 due to Team Crane's successful efforts. It is important to note that Hexane is a HAP that is released into the atmosphere when MTV Grain is manufactured. By recycling the MTV grain offsets this environmentally

undesirable action is effectively alleviated.

Team Crane MJU-32/B, MJU-38/B Rework Effort has significantly contributed to waste and pollution prevention. Their methods not only improve the environment but also inspire other industries to adopt the same practices. Reducing waste and hazardous emissions not only helps the environment but saves money through reduced production and procurement costs. Team Crane will continue to set and meet environmental goals and find new ways to improve waste and pollution methods.

For more information, please contact Doug Johnson at 812-854-2659, or

[doug.johnson1@us.army.mil](mailto:doug.johnson1@us.army.mil). ■



## PNNL Stewardship Team: Conservation through Reuse

Richland, WA



The Pacific Northwest Laboratory is a U.S. Department of Energy National Lab operated by Battelle. The Lab conducts science and technology research while striving to meet environmental objectives. The Lab has registered its Environmental Management System with the ISO 14001:2004 standard and is also a member of the USEPA National Environmental Performance Track program. Through a campaign of reduction, reuse, and recycle, the Pacific Northwest Laboratory Stewardship team has achieved tremendous accomplishments. For FY05, PNNL avoided slightly more than \$2 million in purchasing and waste disposal costs.

In FY 2005, the lab's waste prevention activities focused on four areas: equipment, chemicals, construction materials, and office products. PNNL extends the life of its computers from three to six years in order to reduce the amount of equipment purchased and disposed. PNNL does this by installing larger

hard drives, updating video capabilities, and adding more memory to its older computers. When the computers cannot be used anymore within PNNL, they are donated to local schools. In the last six years, PNNL has donated 1,000 pieces of electronic equipment, which would have cost \$2.5 million to purchase new. In 2005, PNNL switched to using GSA's "Computers for Learning Program" to donate electronic equipment to K-12 schools and non-profit educational organizations. Total donations to local schools consisted of 334 computer systems and other equipment, with the value equivalent to \$1,483,350. PNNL also collects and donates cell phones to Donate-A-Phone, which refurbishes and redistributes them to charitable agencies. PNNL also donated its Inductively Coupled Plasma-mass spec (ICP-MS) to the Oak Ridge National Laboratory, which saved PNNL the cost of disposing the equipment (\$50,500), and saved Oak Ridge National Laboratory the purchase cost of \$400,000.

PNNL reuses chemicals through its "ChemAgain" program. Internal redistribution of chemicals resulted in waste savings of \$1,200 in 2005, and avoided the more than \$3,000 purchase cost of new chemicals.

PNNL was able to recycle the debris from the repair of a dock by having the construction contractor recycle the asphalt and crush the concrete debris for ground cover, saving \$15,498 in waste disposal cost. PNNL also reuses scrap building materials. For example, one carpenter salvaged enough scrap lumber and lexan to build small shipping crates, reducing scrap disposal volumes by five cubic feet per month.

PNNL's Office Product Exchange redistributes office products within the Lab and the community. In 2005, PNNL partnered with 46 local schools, 4 manufacturers, and 19 non-profit organizations to redistribute equipment and office products. Once a week, PNNL has a free shopping day for PNNL and local non-profit organizations to gain office products. In 2005, PNNL avoided sending 195 metric tons of office product materials to the landfill and saved PNNL and community organizations more than \$700 in avoided purchasing costs. PNNL also sends its toner cartridges back to the manufacturers for reuse. In 2005, avoided disposal costs for cartridges were \$4,339 and savings in reduced purchasing prices of remanufactured cartridges were \$137,750.

PNNL sets an incredible example for others to follow in order to prevent waste and pollution. Their productivity in reduction, reuse, and recycle saves on cost of disposal as well as purchasing. For further information, please contact Alice Ikenberry at 509-373-5638. ■



# National Parks Service WASO Concession Environmental Management Team: Green Contracts Prevent Pollution

Lakewood, CO

The National Park Service (NPS) oversees approximately 580 concession contracts that gross more than \$800 million annually, providing visitor services such as food, lodging, retail, and guided services, along with many others. These concessions play a vital role in ensuring NPS’s mission statement “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

In 1999, the NPS established the

Concession Environmental Management Program (CoEMP) to ensure proactive minimizing of concessioner environmental impacts. Remarkably, with very few policies, tools, or resources available to them, CoEMP has triumphed with astonishing “greening” changes to concession contracts, overseeing concession operations, and offering outreach to facilitate continual improvement.

CoEMP provided much input on NPS management policies to ensure sound environmental protection and stewardship. As a result, more and

more parks are not only adopting these corporate environmental policies, but approximately 34 concessioners have already established additional environmental policies to meet individual park needs. CoEMP developed greening contracts, starting with the NPS Standard Concession Contract in 2000, which serves as the basis for all new concession contracts issued by the NPS. Requirements include: compliance, best management practices (BMP) implementation, and, for certain concessioners, implementation of a formal EMS. >>>

## Sustainability Indicators



**National Environmental Performance Track**

**CERTIFIED SEAFOOD**  
PRIDE IN RESPONSIBILITY  
COOCEP  
The Marine Stewardship Council  
Third Party Approval ensures seafood  
meets strict environmental standards.  
www.msc.org

**CLEAN MARINA**

**Green Path**

**ISO**  
International Organization for Standardization

**ENERGY STAR PARTNER**

**USDA ORGANIC**

**PARTNER MEMBER**  
“Green” Hotels Association®  
<http://www.greenhotels.com>

**Xanterra Parks & Resorts Supports Sustainable Fishing**

At Xanterra Parks & Resorts, we believe that there are few more (and/or more complex) tasks than that of reaching a balance between business and the natural environment. To this end, when we purchase seafood for our restaurants, we want to support sustainable fisheries—those managed to sustain populations of fish for the future. We also want to protect marine habitats and promote little “by catch” (washed catch of animals other than the target species).

Based on the latest information from fisheries scientists, we’ve developed a list of seafood products that we will or will not buy at this time. As new information becomes available, we will update our seafood choices. We hope our policy will help ensure in the tourism industry make their own informed choices about seafood.

We are using the Monterey Bay Aquarium Seafood Watch protocol to assist us in our seafood choices. The fish served on our menus are fish we recommend. We select these species based upon three aspects: 1) a wild population that’s abundant enough to sustain fishing; 2) low levels of unwanted catch or “by catch”; and 3) fish caught or farmed in ways that minimize impact to the environment.

**FISH WE WILL NOT BUY**

**Chilean sea bass, shark, Atlantic swordfish, and bluefin tuna.**  
These species’ survival is threatened by too much fishing, or they are caught or farmed in ways that damage the environment. Our “no serve” policy will remain in place until their status changes.

*Andy Tull*  
Andy Tull, CEO and President  
Xanterra Parks & Resorts

> > > CoEMP drafted sample contracts and operating and maintenance plans for park use, after assessing the environmental impacts of several concessioner operations such as hotels and fishing guide companies. Along with the assistance of a contract evaluation panel to evaluate proposals for concession contracts, CoEMP works with park staff to review contract documents and ensure that relevant environmental issues are incorporated. As a direct result, concessioners large and small are showcasing sustainable technologies. Examples of these successful effects range all the way from using only biodiesel in Grand Teton Lodge Company buses, to blending biobased fuels for use in 80-year old boats on Lake McDonald in Glacier National Park.

One of the standard requirements in many contracts is the development of an EMS. CoEMP reviews concessioner EMSs and provides constructive comments for

improvement. To date, CoEMP has reviewed or provided input to 34 concessioner EMSs, as well as four other environmental management documents, such as hazard communication plans or solid waste management plans. Additionally, CoEMP has developed sample EMSs for almost a dozen service types.

In order to oversee the environmental expectations in the contracts, CoEMP also conducts environmental audits and evaluations. The Concession Environmental Audit System (CEAS) gives concessioners direct one-on-one consultation, compliance assessment, and education. To date, CEAS conducted 157 audits, with 3,400 audit findings and more than 100 positive observations. In addition, CoEMP drafted and is testing concessioner-specific environmental criteria for routine operational evaluations of lodging, food, marina, and retail operations.

CoEMP continues to improve

contracted services with outreach through its GreenLine Newsletter and informative website; guidance documents and over 320 assembled resources; personalized assistance and working with government agencies such as the EPA; environmental training through expanded partnerships; and additional consultation with third-party organizations to enhance their respective environmental management programs.

With all of its input, CoEMP serves as an environmentally effective new business model, exemplifying the possibility of overcoming limited resources and funds to achieve high goals of waste prevention. In 2006, CoEMP looks forward to further broadening partnerships with concessioners and parks in efforts of raising the bar for environmental performance in the national park tourism industry. For more information, please contact Wendy Berhman at 303-987-6913 or [wendy\\_behrman@nps.gov](mailto:wendy_behrman@nps.gov). ■

## Coast Guard Aircraft Repair and Supply Center Engineering Support Team: Corn Starch Dry Blast Media

Elizabeth City, NC

In another example of preventing waste and saving money while meeting its mission, the U.S. Coast Guard's Aircraft and Supply Center (ARSC) tested and approved a biobased alternative to conventional aircraft paint strippers. With forward thinking, ARSC successfully demonstrates the positive impact green purchasing has on the environment.

ARSC's principal function is operating the aircraft depot maintenance facility for Coast Guard aviation assets. The Coast Guard's 200 winged aircraft undergo a detailed invasive maintenance inspection every 4 -6 years. All paint must be removed from the airframes being inspected. ARSC previously used two methods of paint stripping: abrasive media such as glass beads and plastic blast or chemical paint strippers. The abrasive media damaged the underlying airframe, while the chemicals are hazardous to employees and resulted in a substantial hazardous waste stream.

ARSC turned to intensive market research and private testing of alternatives that would perform as well while eliminating hazardous waste and avoiding disposal costs. The environmentally friendly option, a dry blast media known as Envirostrip GPX®, proved to be a beneficial asset to the ARSC paint stripping process. Envirostrip GPX® is a non-toxic, biodegradable engineered polymer media derived from corn. Once it is used, it can be returned to the U.S. distributor, Midvale Environmental Technologies, for recycling into a new product known as StarZorb®. StarZorb® is used as a spill absorbent at a licensed treatment, storage, and disposal facility. This cyclical method thereby literally closes the circle of

recycling, reducing, and reusing natural resources.

Switching to Envirostrip GPX® required only simple modifications to existing equipment. ARSC found that the product could remove just the top coat of paint, leaving the primer intact. The underlying substrate is not damaged. The product also allows ARSC to strip an airframe completely without damage. Since their recent switch, ARSC has reported successfully stripping the paint from 43 different airframes and their associated parts, using the cornstarch blast media.

The three immediate benefits of ARSC's green purchase of cornstarch blast media are evident in 1) the health benefit derived from the significant

decrease in personnel's exposure to hazardous chemicals; 2) the elimination of a hazardous waste stream, resulting in greatly lowered disposal costs and enhancing environmental stewardship; and 3) the enhanced capability and flexibility ARSC enjoys in the paint stripping process. ARSC found life-cycle cost savings from a combination of lower unit costs than conventional products and avoided disposal fees.

Many of the DoD aerospace depots are following ARSC's lead. The Navy, the Marine Corps, and Lockheed Martin Aeronautics will test the product this year. For further information, please contact Mr. Carl Woody at 252-335-6624, or [Carl.E.Woody@uscg.mil](mailto:Carl.E.Woody@uscg.mil). ■



## Sandia P2 Staff and Procurement Green Teams: Comprehensive Environmentally Preferable Purchasing Program

Albuquerque, NM

The Department of Energy's Sandia National Laboratories/ New Mexico (SNL/NM) has a Comprehensive Environmentally Preferable Purchasing Program (EPP), which focuses on Procurement Green Teams, a product review process, and product replacement recommendations. These three aspects are geared towards increased purchase of biobased products.

Originally created to focus on recycled content and environmentally preferable products, the Green Teams have widened their scope to include biobased products. Construction contractors are required to submit a tracking form monthly, and payment can be withheld until the form is

received. The tracking form was expanded to include USDA-designated biobased products. It is distributed to each new project along with purchasing expectations regarding recycled content as well as USDA required bio-based products applicable to new construction. This form has increased SNL/NM's construction tracking by 226 percent.

Sandia's quarterly Green Purchasing newsletter encourages cardholders to purchase recycled content products and use biobased products. The Green Teams hosted a two day Green Purchasing Event at SNL/NM. The event consisted of themed seminars such as: office administrative assistants, program managers and

system engineers, and ES&H personnel, procurement cardholders, and procurement personnel. These seminars advocated awareness in purchasing, change to personal habits, available resources in the Federal realm, and basic compliance training regarding recycled content and biobased content products.

Product Review is a cooperative effort between Facilities, Industrial Hygiene, Waste Management, Pollution Prevention and Fire Protection. Each organization can review each new chemical product requested, provide input, and recommend alternative products if need be. For example, a biobased soy product has been tested for paint stripping and appears to be successful, and will most likely replace a paint solvent with hazardous properties that is no longer allowed. SNL uses Pollution Prevention Opportunity Assessments (PPOAs) to identify potential chemical replacements. By participating in ES&H walk-throughs, products are identified that could be replaced with less toxic or non-toxic environmentally preferable substitutions; and the reviewing of chemical process usage results in hazardous waste reduction. For example, in SNL/NM's cafeteria, hazardous cleaning chemicals and plastic to-go service ware were replaced with biobased cleaners and biobased plastic utensils and cartons. SNL/NM scientists have initiated a year-long pilot test of biobased vacuum pump oil and chemical usage is being reviewed. Biobased vacuum pump oil has the potential to impact SNL/NM's lab petroleum consumption and hazardous waste generation.

For more information, please contact Jack Mizner at 505-845-3576 or [jhmizne@sandia.gov](mailto:jhmizne@sandia.gov). ■



## Naval Base Ventura County Public Works Department: Building 850: Energy and Sustainability Showcase

Port Hueneme, CA

The Naval Base Ventura County Public Works Department exemplifies outstanding environmental stewardship with the finished construction of Building 850. The building was awarded the Leadership in Energy and Environmental Design (LEED) Gold rating award in 2005 for its achievement in sustainable design, construction, and operation. It is the Navy's first LEED Gold rated building, and a showcase facility that demonstrates new concepts in energy efficiency and green building principles, not only to the rest of the Navy, but surrounding community as well.

The \$3 million building project consisted of a 10,000 square foot renovation and a 7,000 square foot addition, with the achieved goals of having a highly energy-efficient building, having a high quality work environment, demonstrating sustainable technologies, testing and validating sustainable features for replication on future Navy projects, and serving as a teaching resource for others. The project design team used an integrated design process that included the building owner, architects, engineers, landscape architects, and others. The team modeled design concepts at Cal Poly and Lawrence Berkeley Lab.

Special features of the design include maximized day-lighting and natural ventilation, which reduces the demand of electrical and mechanical systems. Sustainability construction techniques include adaptability for alternate future uses with mechanisms for easy dis- and re-assembly that will reduce future

costs of occupant moves or churn. Construction measures were also taken to minimize soil erosion, maximize the recycling of scrap materials, and maximize the usage of recycled content and environmentally preferable materials throughout the building itself.

One of the priorities in the Building 850 design was energy and water efficiency, and simulation results show a

cool air through a variable air volume underfloor air distribution system. Overall proper operation, including measurement and verification, is ensured by a monitoring Energy and Control System.

Water conservation in Building 850 is ensured through a combination of efficient plumbing features such as waterless urinals and automatic lavatory

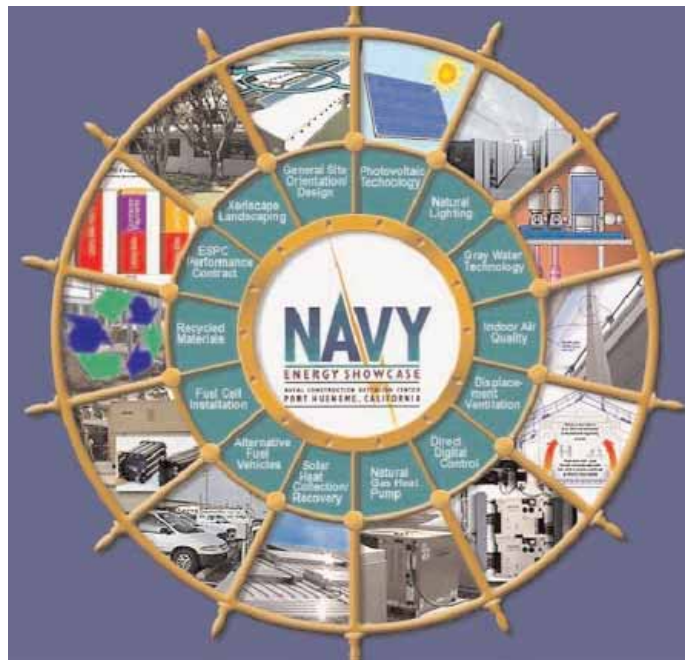
faucets, the use of reclaimed and captured rain water, and efficient landscaping and irrigation systems. The total simulated indoor potable water consumption is only 61,300 gallons per year, compared to the typical 105,000 gallons per year for a similar facility. In addition, Building 850 made transportation more sustainable with features such as five new electric vehicle charging stations.

To further promote sustainability and the greening success of Building 850, education and awareness tools such as an interactive touch screen computer kiosk is located in the lobby to give occupants

and visitors a real-time view of energy demands and sustainable features; posters in the lobby displaying sustainable features; a classroom specifically for sustainable building, and sustainability education; guided building tours for visitors; and sponsored on-site seminars on sustainable design topics.

The building draws more than 100 visitors a year interested in sustainability design to the Naval Base Ventura County. For more information, please contact Dennis Talton at 757-322-4211 or

[dennis.talton@navy.mil](mailto:dennis.talton@navy.mil). ■



55 percent consumption improvement over CA's 1995 Title 24 Energy Efficiency Standards. Hot water is provided entirely by a solar hot water heater. There is limited exterior lighting and the window design provides 100 percent day-lit occupied spaces, with backup lighting of T-8 fluorescent fixtures, controlled by dimming electronic ballasts.

The building orientation, configuration, and windows minimize cooling and heat loads through various tempering strategies such as reciprocating compressors that deliver

## National Parks Service MRO LEED Gold Team: Making 'The Good Life' Sustainable

Omaha, NE

**T**he National Park Service (NPS) Midwest Regional Office (MRO)'s new LEED Gold certified building exemplifies sustainable design and green building accomplishments. In 2001, the MRO outgrew its 1920s era office building in the City of Omaha, NE, and needed to find a new location to house its 150 employees. With sustainability as a strong focus of the NPS mission, it was clear that the new facility should be designed and built to high green-building standards. In addition, MRO took a leadership role in helping Omaha revitalize its riverfront area. Through the strong partnership of the team convened by Noddle Development Company, NPS, and the General Services Administration (GSA) the MRO achieved a LEED Gold Rating on its new facility.

The sustainable design highlights of the building include: landscaping, water and energy savings, recycling, and waste avoidance. Atypical for a downtown Omaha office building, the site includes a variety of native plants, which require little, if any, water, fertilizer, pesticides, or herbicides. They are arranged to help clean sediment and chemicals from storm-water before they infiltrate into the ground.

Water-efficient plumbing fixtures are used in the restrooms, and together with the water-efficient landscaping, ensure high water savings. The new facility uses 45 percent less water than the previous MRO facility, and saves \$500 per year on water costs. Energy savings are 30 percent more efficient than they were in the former building, and yield additional cost savings of \$3,000 less per year for electricity and gas.

When moving offices, the MRO staff worked hard to ensure proper



recycling of all the generated waste, and launched an extensive recycling program. With limited space to store recycling containers, MRO doubled the frequency of pick-ups, and maintained a strong relationship with volunteers who assisted their efforts without any cost demands. The new building has a space for separating recyclables, and MRO worked with the janitorial staff to make sure that the space is used for recycling. Their recycling paid off with a total achieved collection of 1.7 tons of corrugated containers, 16.9 tons of office paper, and one half ton of phone directories, between January and November 2005. Additionally, MRO now collects batteries and cell phones. The cell phones are reprogrammed for use by women's shelters.

MRO also has an effective EMS Committee to ensure that the new

building continues to operate sustainably. The EMS and IT teams, for example worked to reduce waste paper generated from the shared printers. The EMS team identified the banner pages printed for each job as a source of waste. The IT staff found that more than 14,000 sheets of paper had been used in a six-week period just to print the banner pages! The EMS Committee and IT team identified a software solution that allows the continued use of shared printers without the waste of banner pages.

MRO continues to promote its sustainability efforts through such outreach activities as developing rideshare programs to parks in the regions, building on their partnership with Keep Omaha Beautiful, and their participation in the Adopt-a-Trail Program, which prevents littering. For more information, please contact Ruth Heikkinen at 402-661-1982. ■

## Naval Station Great Lakes Base Support Transportation Team: Alternative Fuel and Fuel Conservation in Transportation

Great Lakes, IL

**N**aval Station (NAVSTA) Great Lakes has gone above and beyond with their achievements in alternative fuel programs and their overall promotion of fuel conservation. NAVSTA Great Lakes hosts the Navy's only boot camp, Recruit Training Command, which annually trains and equips up to 50,000 new sailors. It also provides more advanced training to an average of 15,000 students annually. It manages a fleet of more than 650 passenger cars, light trucks, and construction equipment. Of these, 229 are alternative fuel vehicles, using a mix of compressed natural gas, E-85 ethanol, and biodiesel. The facility is located in an ozone non-attainment area.

In 2005, NAVSTA Great Lakes installed a compressed natural gas (CNG) fueling facility, purchased additional alternate fuel vehicles (AFVs), began implementation of a biodiesel fuels program, and reduced overall fuel use by more than 31,000 gallons of fuel used.

Promoting partnership, NAVSTA Great Lakes teamed with the naval facilities Engineering Command (NAVFAC) Midwest, a local natural gas supplier, and a CNG fueling vendor to construct a modern dual pressure CNG fueling station. This facility supports the 67 current CNG vehicles and is sized to support the facility's planned expansion to 200 vehicles. The system has a higher pressure capability, which improves vehicle range per fueling, and NAVSTA has reported improved user satisfaction resulting from this system's installation.

NAVSTA Great Lakes operates an E-85 ethanol fueling station. Despite budget restrictions the facility dedicated funding to acquiring 30 additional E-85 vehicles, increasing the fleet total to 162 E-85 capable vehicles.

When combined, the total NAVSTA Great Lakes AFV fleet (CNG and E-85) now totals 229 vehicles and equates to 42 percent of the total light vehicle fleet. NAVSTA Great Lakes' goal is to recapitalize its entire vehicle fleet by replacing traditional fueled vehicles with AFVs at a rate of at least 15 percent per year. In addition to purchasing new AFVs, NAVSTA Great Lakes acquires excess AFV vehicles disposed by other Federal agencies, enabling the facility to expand its fleet at no additional investment cost.

NAVSTA Great Lakes plans to convert not only light and medium, but also heavy construction equipment to B20 biodiesel fuel. NAVSTA has completed the necessary business analysis and equipment evaluation for the biodiesel fueling facility, which is scheduled to be implemented in 2006. With this upcoming switch, 152 current diesel vehicles will be converted to B20 fuel. As a significant result, 70 percent of the total fleet will meet AFV standards. Only emergency medical service and certain tactical equipment will continue to use traditional diesel fuel.

NAVSTA Great Lakes also is reducing petroleum consumption through fuel conservation programs such as a base shuttle system, a vehicle usage and efficiency program, ride-sharing, and vehicle maintenance and emissions testing programs also exist. These conservation programs resulted in a reduction of more than 31,000 gallons of fuel consumed compared to 2004 consumption. On a daily basis, an average of 500 base personnel use the shuttle program. Environmental and resource beneficial, this saves 800 vehicle trips a day, and an estimated 12,000 gallons of fuel each year.

Just as importantly, NAVSTA Great Lakes is excelling in its education and

outreach involvement. Through a multi-media approach the facility encourages and informs the community, regulatory, and industry groups about alternative fuel and pollution prevention programs. A specific example of the many outreach efforts is their participation in Earth Day awareness activities, including school visits, exhibits, and tours. Additionally, NAVSTA Great Lakes is a member of the Chicago Area Clean Cities Coalition, a Partner for Clean Air with the Illinois EPA, and is actively involved with USEPA Region 5 and Illinois EPA in the Illinois DoD Pollution Prevention Partnership.

For more information on NAVSTA Great Lakes' alternative fuel and conservation in transportation, please contact Mark Schultz at 847-688-5999 ext 140 or [mark.r.schultz@navy.mil](mailto:mark.r.schultz@navy.mil). ■

## Alternative Fuel / Fuel Conservation in Transportation – Civilian Green Fleet Team: Petroleum Fuel Reduction Washington, DC

Continuing its leadership in alternative fuel use, DOE created a “Green Fleet” designation for DOE fleets using more than 45,000 gasoline gallon equivalents (GGE). In FY 2005, the Green Fleet Team was comprised of Idaho National Lab



(INL), Pantex Plant (Pantex), Sandia National Lab (SNL), and Savannah River Site (SRS). The Green Fleet collectively consumed 62 percent of the total DOE alternative fuel use through AFVs and alternative fuel sources.

The Green Fleet Team’s use of AFVs and alternative fuels sets a fine example for other members of the Federal government. The Green Fleet Team has created an infrastructure of new alternative fuel refueling stations. Vehicle efficiency has been increased across fleets, beyond the three miles per gallon required by Executive Order 13149. The Green Fleet Team has actively promoted alternative fuel consumption within their community as well as among the Federal, State, and commercial entities. The Team has exemplified various methods of increasing fuel efficiency, through hybrid cars and neighborhood electric vehicles (NEV), ride sharing programs, fleet logistics improvements, and effective maintenance programs.

The Green Fleet Team’s efforts increased the use of E-85, biodiesel, and CNG. Each individual fleet contributed in its own way to the collective success of the Green Fleet Teams’ substantial reduction in petroleum consumption. The Savannah River Site fleet converted its light duty fleet to run on E-85. As a result, SRS has the largest population of E-85 vehicles within the DOE fleet, with 500 E-85 vehicles. In order to have these vehicles easily refueled, SRS built two E-85 stations. SRS E-85 fuel use increased by 19 percent, from 17 percent if the fleet’s total covered fuel consumption, to 36 percent.

Idaho National Laboratory has been particularly innovative in its

reduction of petroleum consumption. Although exempt geographically from being required to use alternative fuel vehicles, INL uses liquefied natural gas (LNG), CNG, E-85, and B20 biodiesel. INL installed an E-85 station on-site in FY 2005, in addition to its other alternative fuel stations already on-site. It consumed 11,000 GGE of E-85 in its first year of using this particular alternative fuel. INL tripled its use of B-20, totaling 120,000 GGE. This is more than 25 percent of the entire DOE usage of biodiesel. The fleet designates 24 percent of its vehicles – 170 vehicles — as alternative-fuel capable.

Located in Amarillo, TX, Pantex is dedicated to reduced petroleum use and increased alternative fuel use. Pantex’s diesel vehicles are fueled only with B20, representing 26 percent of total B20 use in DOE. Forty-seven percent of Pantex’s 194 vehicles are flex-fuel vehicles that can use E-85. Pantex uses more than 123,000 GGE of B20 and 47,000 GGE of E-85.

Sandia National Laboratory has also excelled at transitioning to AFVs and using alternative fuels. Of the 374 vehicles in the fleet’s inventory, 79 percent are AFVs. This is the largest population of AFVs in the DOE fleet. Of the light duty vehicles acquired in FY 2005, 77 percent were AFVs. SNL vehicles use B20, CNG, and E-85. SNL replaced 75 percent of its total diesel with B-20 and quadrupled usage of E-85 in one year.

The DOE Green Fleet Team makes up 62 percent of the total alternative fuel consumed by the entire DOE fleet, which equates to 370,000 GGE of alternative fuel consumption. For more information, please contact Shabnam Fardanesh at 202-586-7011 or [shabnam.fardanesh@ee.doe.gov](mailto:shabnam.fardanesh@ee.doe.gov). ■



## United States Postal Service –Han T. Dinh: Expansion of Biodiesel Utilization at USPS

Washington, DC



**T**he U.S. Postal Service (USPS) has been using delivery vehicles that run on alternative fuels such as biodiesel. USPS is one of the first Federal agencies to use biodiesel, and has steadily increased its usage. In addition, USPS has been conducting considerable research on the technical and operational implications of B20 use and shares the information with a variety of interested sectors.

From FY 2000 to 2005, USPS' B20 consumption almost tripled, with a total usage of 1,142,631 GGE in FY 2005. It is estimated that between FY 2003 and 2005, USPS reduced emission of particulate matter by 2,262 pounds, hydrocarbons by 4,274 pounds, and carbon monoxide by 36,212 pounds through the use of B20.

Recognizing the need for well-documented, on-road fleet studies and engine wear analyses of the impact of

using B20, USPS initiated a fleet testing project. The project was designed to critically evaluate biodiesel fuel and its enhanced lubricity in terms of mechanical wear of engine components, compatibility with non-metal engine items, solvent action, deposit-forming tendencies, and corrosive potential compared to conventional diesel fuel. USPS collaborated with DOE's National Renewable Energy Laboratory on the project. They studied eight existing vehicles — four using B20 and four using conventional diesel. The study included engine break-down and analyses.

USPS found advantages and disadvantages to the use of biodiesel fuel. Initial results showed no mechanical or operating issues, but testing found unexpected deposits on the cylinder heads in the B20 Mack test vehicles. The Mack B20 trucks also

had some fuel filter plugging and fuel injector nozzle wear. The Ford trucks did not have these issues, however, and USPS believes that the results were attributable to off-specification fuel. USPS concluded that biodiesel vehicle maintenance costs were comparable to diesel vehicle maintenance. This research serves as a baseline for more extensive biodiesel research, and has been presented at national conferences. USPS is continuing its testing with new vehicles and vehicles operated in colder climates.

USPS will continue to use B20, expecting its consumption to increase with Federal tax incentives, future lower fuel costs, more refueling infrastructure, and more positive results from testing. For more information, please contact Casey Cole at 202-268-5073, or [casey.e.cole@usps.gov](mailto:casey.e.cole@usps.gov). ■

## US Army Fort Campbell Pollution Prevention Team: Zero Waste is the Goal

Fort Campbell, KY

**T**he Fort Campbell Army Installation supports 29,300 military personnel and 56,700 family members, employs 4,200 civilians, and provides services to more than 130,000 retirees. It is located on 105,000 acres in two states. As a former Closing the Circle award winner in this category, Fort Campbell has not rested on prior awards, and decided to set an ambitious goal of zero waste disposal by 2028. The Fort Campbell DPW Environmental Division P2 Branch has a long list of impressive accomplishments and continues to conduct studies to improve their recycling methods. The

program is comprehensive in scope, addressing conventional recyclables, construction and demolition debris (C&D), and hazardous materials/waste.

In FY05, the program doubled its recycling outreach initiative. It conducted waste stream sorting studies, which resulted in identification of additional recyclables that were being discarded in the installation schools. It also began electronics recycling and a pilot school composting project.

The Pollution Prevention Operation Center (PPOC) at Fort Campbell has succeeded in its focus on hazardous materials reduction, reuse, and waste

reduction. During 2004/05, nearly 28,000 gallons of antifreeze were recycled, saving \$207,750. Through the PPOC's support of parts-washer customers and on-site parts washers, about 46,000 gallons of solvent were recycled, reducing hazardous waste disposal by 96 percent since 1994. The PPOC tests batteries before disposing them, and with a 55 percent pass rate for batteries, saved about \$1.58 million in avoided procurement and disposal costs. Additionally, the PPOC recycles oil, fuel, and lead acid batteries, generating approximately \$55,000 for Morale Welfare and Recreation programs in 2004/05. > > >



> > > The Fort Campbell DPW Environmental Division P2 Branch conducts studies on diversion methods in order to identify waste prevention and recycling opportunities. For example, the Debris Management study resulted in revisions to the Installation Design Guide, a waste management contract specification, and a Contractors Tool Kit that assists contractors in developing bids for and managing construction waste.

C&D accounts for 65 percent of Fort Campbell's waste stream annually. Fort Campbell has instituted aggressive C&D diversion initiatives to significantly reduce the amount of materials landfilled. In 2005, 61 percent of C&D waste was diverted from the landfill for recycling or reuse. A new initiative requires C&D to be reused on-site. For example, trees removed from project sites must be ground for erosion control and concrete ground for on-site road base. Concrete such as whole buildings, footings, foundations, and slab sections are stockpiled and ground into gravel for use in road and parking lot surfacing and drainage swales. In FY05, 7,640 tons of concrete were ground,

resulting in significant savings in avoided aggregate purchasing costs.

Fort Campbell also is deconstructing buildings, with materials going either to the deconstruction contractor for use in new construction projects or to stockpiling for reuse. Deconstruction diverts 50 to 90 percent of a total building from landfilling.

Fort Campbell also is recycling wood debris, yard waste, and wooden products such as pallets. It partnered with the local off-post landfill to divert 431 tons of wood debris into mulch. The mulch is used for erosion control, post beautification, and as an amendment to landfill cover. Excess repairable pallets are sold for repair and for reuse.

One of the outstanding elements of Fort Campbell's program is the extensive education and outreach activity. In addition to the waste sorts and composting pilot, the Environmental Division used established programs such as Educational Outreach, the 35th Annual Army Earth Day, Fanny Freckles Dee Dee Ducky and Friends, Paper Contamination and Educational Emails,

Power of Cyberspace, and the Paper Reduction Campaign to educate the base population about recycling and promote pollution prevention activities.

Earth Day Every Day! is a campaign conducted by the Environmental Division that measures schools recycling commitment quantitatively by making it a year long competition. The highest scoring school is awarded on Earth Day. America Recycles Day Giveaways and Displays are conducted during America Recycles Day week, where display booths advertise recycling information and give out items made from 100 percent recycled content. The Fort Campbell Recycling Newspaper for Kids is called "Trash Talk" and is distributed to fourth and fifth graders. The newsletter provides recycling information, games and puzzles. The Magic of Recycling Magic Show is an educational performance that uses props made from recyclables and performs for elementary school children.

For further detailed information, please contact Mike Davis at 270-798-9767 or [mike.davis2@campbell.army.mil](mailto:mike.davis2@campbell.army.mil). ■

## Y-12 National Security Complex Reduce, Reuse, and Recycle Team: Multi-Organizational Reduce, Reuse, and Recycle at Y-12

Oak Ridge, TN

**T**he Y-12 National Security Complex is a leading manufacturing facility helping ensure a safe and reliable U.S. nuclear weapons deterrent. Located in Oak Ridge, TN, Y-12 is operated for the National Nuclear Security Administration and plays a crucial role in the Department of Energy's Nuclear Weapons Complex. By using an EMS approach, Y-12 created an extensive facility-wide partnership to increase source reduction/recycling/reuse, and fostered a facility-wide pollution prevention ethic.

In efforts to continuously improve their existing Pollution Prevention (P2) Program, Y-12's EMS includes pollution prevention objectives and targets. Y-12 established a multi-organizational Reduce/Reuse/Recycle Team, which incorporates the areas of business, operations, support, and legal functions. The team consists of a broad array of members, including representatives from Environmental Compliance, Facilities, Infrastructure, and Services, Radiological Control, Transportation, Waste Operations, Manufacturing, Safeguards and Security, and Technology Development. In FY 2005, success of this team was highly evident. Within the recycling function alone, Y-12 implemented 70 projects reusing/recycling nearly 20,000 metric tons of materials with an estimated cost avoidance of \$1.67 million.

The secret of Y-12's success was honest self-evaluation and the realization that partnering with other organizations would efficiently facilitate increased source reduction, reuse, and recycle methods. The created partnerships comprise the Y-12 Reduce/Reuse/Recycle Team with the mission statement:

***To provide a coordinated approach to meeting various pollution prevention and waste minimization requirements and serve as a forum for increased communication and consistent implementation of pollution prevention reduction/reuse/recycle activities. The Reduce/Reuse/Recycle team serves as an information exchange mechanism to promote general awareness of pollution prevention information, providing a system to document pollution prevention progress and identify resources necessary to implement pollution prevention opportunities, including reducing/reusing/recycling materials.***

The Y-12 Team serves as an information exchange mechanism to promote general awareness of pollution prevention information, a system to document progress and identify the resources needed to implement these pollution prevention opportunities.

Along with the objective of complying with federal and state regulations and DOE requirements for pollution prevention, the Y-12 Team has taken on responsibilities to assist with implementing programs and activities necessary to reduce the amount of waste and environmental pollutants within the various Y-12 organizations. They endorse, promote, and support implementation of the Y-12 PrYde Program, and Clean Sweep Program, as well as other techniques

and technologies that cleanse the site.

They ensure that new projects or changes to existing facilities have pollution prevention efforts. They achieve their goal of reducing or eliminating the generation of waste through process modification, improved housekeeping, closed-loop recycling, and external recycling. Examples of completed projects spearheaded by this team in FY 2005 include fire extinguisher recycling, generator reuse, pallet recycling, and material and equipment reuse and recycling.

Excess fire extinguishers are sent to a local recycling vendor, resulting in a total reduction of approximately 6.24 MT of industrial waste and cost avoidance of more than \$31,400.

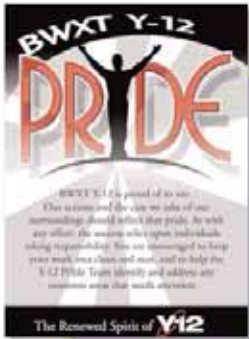
Excess generators were transferred to support the efforts of non-proliferation and Department of Homeland Security (DHS) response efforts. Four generators were provided to the DHS to supply emergency electrical power during the recovery efforts from Hurricane Katrina. This eliminated the generation of 2.26 MT of industrial waste and resulted in cost avoidance of \$642,222.

Recycling broken wooden pallets at a local off-site compost facility reduced waste generation by approximately 116.59 MT with an associated cost avoidance of approximately \$38,000. In addition, the transfer of about 2,250 pounds of excess abrasive media to the Sandia National Laboratory for reuse, reduced waste by approximately 1.02 MT and saved approximately \$50.73.

For more information, please contact either Janice Jackson at 865-241-2567, [gilbertjm@y12.doe.gov](mailto:gilbertjm@y12.doe.gov); or Richard Martin at 865-576-9428, [martinrm@oro.doe.gov](mailto:martinrm@oro.doe.gov). ■

# BWXT Y-12 Reduce/Recycle/Reuse Team Partnership

Partnering at Y-12 through Y-12's multi-organization Reduce/Recycle/Reuse Team



*PrYde Program*



*Recycling Program*



*Swap List*



*Clean Sweep Program*



*After*

*After*

## EPA Recycling Electronics and Asset Disposition (READ) Services Team: A Government Wide Procurement Tool to Properly Manage, Recycle and Dispose of Electronics

Washington, DC



By using the READ program, EPA kept 350 pallets of electronic equipment or 350,000 pounds out of the landfill. The Federal Emergency Management Agency allotted \$1.4 million to READ to recycle electronic equipment from the affected regions of Hurricane Katrina and Rita in 2005. READ contractors removed two to four truckloads of electronic equipment per day for recycling, weighing approximately 30,000 pounds each. On November 15, 2005, EPA participated in America Recycles Day, which sought to encourage all Federal facilities to recycle or donate their used computers to local schools or hurricane relief efforts.

Over the next five years, EPA intends to increase electronics recycling or reuse by 10 percent annually, to achieve cost savings of 10 percent over the first three contract years, and have 30 agencies use the GWAC by the end of the first three contract years. EPA is proactively promoting the READ GWAC to Federal agencies. EPA educates through presentations to various conferences and workshops. As a result EPA issued \$90,000 worth of task orders for electronics recycling at EPA headquarters and regional offices. Both the Department of Education and the Bureau of Alcohol, Tobacco and Firearms plan to use READ services throughout the U.S. For more information about the GWAC, go to <http://www.epa.gov/oam/read>, or contact Oliver Voss at 202-564-4514 or [voss.oliver@epa.gov](mailto:voss.oliver@epa.gov). ■

**K**nowing that the improper disposal of used electronics has the potential to release toxic chemicals into the environment and consistent with its mission to protect human health and the environment, the U.S. Environmental Protection Agency (EPA) developed, bid, and awarded a government-wide acquisition contract (GWAC) for electronics recycling services. Known as the Recycling Electronics and Asset Disposition (READ) services program, the GWAC provides all Federal agencies with a procurement tool to properly manage electronic and recycle and properly dispose of excess or obsolete electronics in an environmentally responsible way. The READ GWAC

consists of five-year multiple awards contracts to seven small businesses. The READ contractors offer logistical and inventory support; testing, auditing, and tracking; data security; valuation process; recycling; and management and technical support services.

The Federal government is one of the largest consumers of electronic products, purchasing seven percent of the world's computers. The government disposes of 10,000 computers a week, and if mishandled toxic chemicals can be released into the environment. Donating, reusing, and recycling prevent electronics from going to landfills and can be more cost effective than disposal.

## Minerals Management Service Caryn Smith: A Work Environment that Works for the Environment

Anchorage, AK

**C**aryn Smith is an Oceanographer for the Department of the Interior's Minerals Management Service's (MMS) Alaska Region. Ms. Smith's consistent efforts to promote recycling, prevent waste, and improve the general work environment distinguish her success of literally creating "a work environment that works for the environment."

When the MMS Alaska Region moved their offices into a newly constructed building, Ms. Smith immediately recognized an opportunity and campaigned for a "green" office space. By gathering and presenting information on environmentally preferable materials for office system furniture, carpeting, air circulation, and space configurations; while collaborating with management, the administrative office, the contract space designer, and the builder to incorporate U.S. Green Building Council recommendations during the planning stage, Ms. Smith successfully assured environmentally sound options for the new office space.

After the move, as well as before, Ms. Smith has been a leading advocate for recycling. She played a key role in planning the recycling collection facilities in the old and new building. During the office switch, Ms. Smith researched local recycling capabilities for materials generated as the offices were emptied and packed for the move. Given Alaska's remote location,

markets for recyclables often are limited. She arranged to have recyclables picked up weekly versus monthly and also on a needed basis when heavy demand dictated.

Ms. Smith briefed Regional management and staff on statutory and executive order recycling requirements. Based on her briefings, in-office recycling stations and a staging room were established for office paper, mixed paper, newspaper, corrugated containers, plastics, aluminum cans, print cartridges, computer components, and batteries. Furthermore, Ms. Smith keeps the office informed about special recycling collections in the community, including electronics and hazardous materials.

To prevent waste, Ms. Smith promotes conservation of paper and double-sided printing, while initiating conversion of documents to electronic format, and being involved in the agency's development of electronic government capabilities.

Ms. Smith's community efforts include motivating office involvement in community environmental-awareness events such as the annual Anchorage Creek Cleanup. Caryn Smith is an excellent example of how one determined individual can have a strong, positive influence on the environment and inspire others to do the same.

For further information, contact Caryn Smith directly at 907-334-5248, or [Caryn.Smith@MMS.gov](mailto:Caryn.Smith@MMS.gov). ■



## Office of the Federal Environmental Executive

White House Task Force on Waste Prevention and Recycling

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