

2001

DOE Pollution Prevention Awards



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This document is also available on the Pollution Prevention Team (EM-22) Web site at <http://www.doep2.org/wastemin>, and on the Pollution Prevention Portal Web site at <http://www.em.doe.gov/p2> (select Programs and Initiatives, Waste Generation and Pollution Prevention Progress, Awards).



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Department Of Energy
Albuquerque Operations Office
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The Albuquerque Operations Office, National Pollution Prevention Program, is proud to offer this summary of the Fiscal Year 2001 U. S. Department of Energy Pollution Prevention Award submissions. I would like to take this opportunity to offer my congratulations to all of the award nominees for your hard work and dedication to the Department's Pollution Prevention Program. Your efforts are recognized and commended by the Department.

This document presents a summary of the 70 pollution prevention project nominations that were submitted in 12 project categories by the Department of Energy sites for Fiscal Year 2000. Fifteen nominations were selected as Pollution Prevention Award Winners, and 22 were selected as Runners-Up.

Of the 70 nominations, 33 were submitted as candidates for the White House Closing the Circle Award. Seven nominations were selected to receive this prestigious award; these winners are also recognized in this document.

Each pollution prevention project nomination is significant in demonstrating how pollution prevention techniques, practices, and technologies have been successfully implemented within the Department. I encourage you to review all of the nominations to determine how your site can implement successful projects to eliminate or reduce waste generation. For additional information on specific projects, please contact the point of contact noted with the project's description.

Should you have any comments or questions regarding this publication, please contact Mr. Mike Sweitzer, U.S. Department of Energy, Albuquerque Operations Office, National Pollution Prevention Program, at 505-845-4347, or via e-mail at: msweitzer@doeal.gov.


R. E. Glass
Manager



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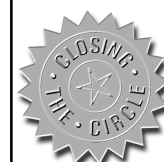
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*2001 White House
Closing the Circle
Awards*



White House Closing the Circle Awards

On April 20, 2001, the White House Task Force on Recycling announced the winners of the 2001 White House Closing the Circle Awards for recycling, waste prevention, and environmental accomplishments. Of the 148 nominations submitted by 15 Federal agencies, 39 winners were selected. The Department of Energy was selected for seven awards, the award winners are:

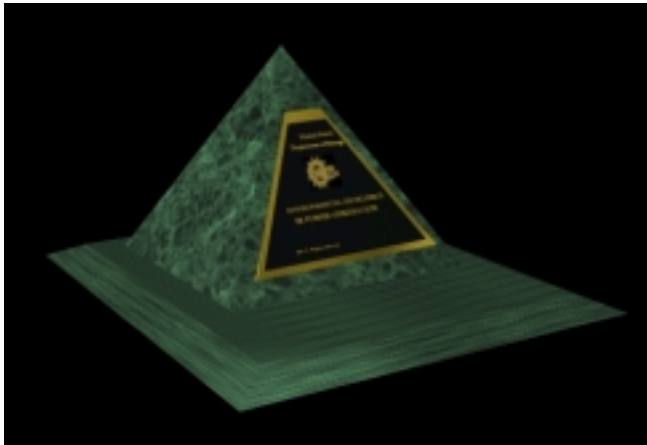
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- **Sowing the Seeds for Change**
Digital Signatures for Databases Eliminates Piles of Paperwork
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory

Pollution prevention projects that received the Closing the Circle Award are indicated in this document by the "Closing the Circle" seal.

The Closing the Circle Awards were presented to the winners during a ceremony held on June 12, 2001, at the Old Executive Office Building, in Washington, D.C.

*2001 DOE
Pollution
Prevention
Award
Winners*

“Green” Trophies Made from Recycled Computers



These distinctive trophies represent a successful collaboration between the U.S. Department of Energy and private industry.

These distinctive trophies represent a successful collaboration between the U.S. Department of Energy (DOE) and private industry. Through DOE's Office of Industrial Partnership's grant program, engineers at the Kansas City Plant and Resource Concepts, Inc., developed a new material from recycled computer components. This material makes a very attractive and durable product, with potential for many commercial and industrial applications.

DOE pioneered the use of this material by creating awards plaques for the prestigious Pollution Prevention Awards Program.

The material has entered the commercial sector, where it is used in countertops, floor tiles, and other products, including these pyramid-shaped trophies. New applications continue to unfold for this material, including use in plastic lumber, furniture, and concrete.

As advances in electronic technology accelerate, the quantity of obsolete electronic equipment continues to grow, presenting an increasing disposal problem. Because of the high lead content, the Federal Government prohibits disposing computer monitors and terminals in landfills. Several states and other countries are also implementing landfill bans on consumer electronics. Innovations such as this new material will have an increasingly important role in conserving landfill capacity. To date, Resource Concepts, Inc., has recycled over two million pounds of electronic equipment, and has generated a new multi-million dollar industry.

Award Winners

Affirmative Procurement

*Carpet Purchasing and Recycling Initiative
Headquarters, Office of Administration, Office of Operations*

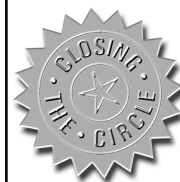
Nominated Team/Project/Facility: Recycling Team
Amos Street, Jr., Director Assets Management and Support Services Group, MA-212
Craig S. Frame, Contracting Officer Office of Headquarters Procurement Services, MA-541
Terry B. Butler, Team Leader, Warehouse, Moving and Support Services Assets Management and Support Services Group, MA-212
Logan L. Watts, General Supply Specialist Warehouse, Moving and Support Services Assets Management and Support Services Group, MA-212

Winner, 2001 White House Closing the Circle Award, Affirmative Procurement

Since the issuance of Executive Order (EO) 12873 and the new EO 13101, as well as the ensuing changes to the Federal Acquisition Regulations, and the Environmental Protection Agency's Comprehensive Procurement Guidelines, greening of U.S. Department of Energy (DOE) facilities has posed numerous challenges to Federal procurement specialists. One area where DOE was interested in finding a way to close the circle was through the establishment of a carpet recycling program where environmentally preferable carpet is purchased for installation in DOE facilities, and the discarded carpet is diverted from landfills. Carpet takes over 50 years to decompose, and many landfills no longer accept this material.

In the Fall of 1999, the first steps towards a carpet recycling program began. A Statement of Work (SOW) which combined a requirement for recycled content of new carpet with the added requirement that the vendor recycle the discarded carpet was prepared. The solicitation evaluated potential vendors under a three-phase process. Phase I required the vendors to submit their renditions of DOE's existing carpets. They had to approximately match in color and pattern the current interior design scheme. Phase II required a minimum recycled content (60 percent in the backing and 15 percent of the nylon face yarn) to be used in the new products. Additionally, the SOW required information on their plan to recycle the discarded carpet. Two vendors passed both the Phase I and Phase II evaluations. The final selection under Phase III was based on a "Best Value" determination including a pricing chart, covering a five-year period, with the anticipated requirements of DOE for carpet for the Forrestal and Germantown buildings.

On November 27, 2000, the DOE Assets Management and Support Service Group (MA-212) and Headquarters Office of Procurement Services (MA-541.2) Teams, successfully awarded a turn-key, five-year Blanket Purchase Agreement (BPA) for the acquisition, installation, removal, and recycling of carpet to Collins and Aikman Floorcoverings. This contract agreement costing was negotiated below the General Service Administration's discount pricing for carpets and related services. This is believed to be the first BPA of its kind for any Federal agency.



The new carpet provided under this contract will contain between 30-40 percent recycled product in the face fiber, and 100 percent recycled product in the carpet backing. All discarded DOE carpet and backing will be 100 percent recycled into another carpet product or other consumer products. The environmental benefits from the five-year BPA include over 800 tons of carpet diverted from the landfill, and by utilizing recycled content carpets (vinyl backed with a nylon face for high performance), the need for virgin vinyl, a petroleum based product, has been significantly reduced. In addition, less water and energy use are required in the manufacture of these carpets.

For more information, contact Amos Street, Jr., DOE Office of Administration, Office of Operations, telephone 202-586-5201, e-mail amos.street@hq.doe.gov.

Award Winners

Education and Outreach and Information Sharing

*Savannah River Site Pollution Prevention Program Outreach and Information Sharing
Savannah River Operations Office, Savannah River Site*

**Nominated Team/Project/Facility: P2 Communications Team
Penny Fulghum, Caroline Grosso, Sarita Berry, Glenn Siry, Larry McCollum,
Steve Mackmull**



Handicapped individuals at the Aiken Rehabilitation Center have begun making the filters for the Super Sleever seen here. This Super Sleever is one of the inventions which has sprung out of the Pollution Prevention Program at the Savannah River Site.



Cardboard is just one of the many items recycled at the City of North Augusta's Material Recycling Facility. This joint venture has increased the recycling rate at the Savannah River Site, and has allowed the City of North Augusta to efficiently operate their facility including program expansion.

Public and employee involvement and education are key elements of the Savannah River Site's (SRS) ISO 14001 certified Environmental Management System, of which Pollution Prevention (P2) is a major focus. The SRS P2 Team made a dramatic impact on the Central Savannah River Area (CSRA) through their broad range of community involvement and educational outreach activities. The SRS P2 team focused on two primary areas: to make an economic impact on the surrounding community, and to increase public awareness by P2 education and community involvement.

Numerous awareness and education events were sponsored with award winning displays. P2 is instilled into the Site's business culture, and is reflected out to local communities. Stakeholder involvement at SRS follows the legal requirements of the National Environmental Policy Act (NEPA), Resource Conservation and Recovery Act (RCRA), and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), but also reaches beyond to provide opportunities to support the SRS Citizens Advisory Board and special meetings, focus groups, and special events highlighting SRS programs. The P2 Program's communications plan strives to effectively utilize these opportunities to educate employees and the public.



The Savannah River Site's Safety Conference theme of "We're Off to Prevent Pollution" won the "Best Exhibit" award at the 2000 Safety Conference.



Student visits in the Savannah River Site's surrounding communities resulted in direct contact with over 2,000 students and teachers in 70 different schools.



The annual Central Savannah River Area Technology Day, which is held in Augusta, Georgia, reaches thousands of students across a two state area. At this year's event, the Pollution Prevention Team was awarded First Place in the "Peer Recognition" category.

The P2 Team at SRS continues to be a leader in the surrounding community by aggressive involvement and education related to P2. The local economy has been boosted by the addition of jobs at the Three Rivers Regional Landfill, Aiken Rehabilitation Center, and the Material Recycling Center in North Augusta, South Carolina. Additional money has been generated as a direct result of the recycling efforts of SRS, and through the implementation of new P2 ideas. P2 Team members have set an example of excellence in various community events and activities that reinforce the Team's commitment to P2 education in the CSRA.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Winners

Environmental Management Systems (EO 13148)

*Savannah River Site Environmental Management System
Savannah River Operations Office, Savannah River Site*

**Nominated Team/Project/Facility: SRS Management Team
Greg Rudy, Joseph Buggy, Lawrence Brede, JoAnn Abell, Paul Bertsch,
David Wilson, Tom Heenan, Ben Gould, Ron Peterson**

Stewardship of the environment is a critical Savannah River Site (SRS) mission. The SRS Management Team is committed to the protection of the environment onsite, and where site operations could affect the offsite environment. Operations are conducted in accordance with DOE Orders and Federal and state environmental laws and regulations. Integration of these environmental requirements into the myriad of daily operations at SRS is the essence of the SRS Environmental Management System (EMS).

The EMS was instilled into the culture and infrastructure of the site in much the same way as industrial safety has been made a part of daily life through the Voluntary Protection Program (VPP). The Site was able to accomplish this by accepting the challenge of meeting the certification requirements of the International Standards Organization (ISO) for ISO 14001, "Environmental Management System." The successful implementation at SRS was attributed to the innovative approach of integrating the environmental requirements, via the procedure management system, into the planning and work processes for all of the Site's business units and organizations, instead of developing and maintaining a separate set of "environmental" procedures. This resulted in the diverse organizations and companies, including a consistent interpretation of the applicable environmental requirements in their standard operating, maintenance, engineering, and emergency response procedures. Implementing the EMS in this manner had the additional benefit of dovetailing these activities into the DOE Integrated Safety Management System (ISMS) so that the environmental aspects of safety received appropriate line management acceptance of responsibility and implementation of controls for potential environmental hazards. As part of the SRS ISMS Strategic Improvement Plan, environmental management, pollution prevention and energy efficiency techniques and technologies are enhanced within all work activities.

The health of the Savannah River Site's environment is better today than it has been since the start of Site operations in 1952. The SRS EMS has evolved to a mature and cost-effective business tool. It has been viewed as a model by various other organizations including other DOE sites, government agencies, and private industries. The system successfully brings environmental requirements and commitments to the worker, and provides them with the tools they need to assess their actions, and to continually identify ways to protect the health of the environment. Integration of EMS into the daily operations of Site organizations has resulted in increased awareness of environmental stewardship responsibilities for all workers, has promoted teamwork among all SRS organizations, and has served to encourage the development of a "Continuous Improvement" attitude related to the protection of the environment at SRS.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Winners

Environmental Preferability

*Central Supply Facility
Chicago Operations Office, Argonne National Laboratory - East*

Nominated Team/Project/Facility: Plant Facilities Services/Facilities Engineering and Construction Division

Ron Ghilardi, Jack Logue, Mark Boehlen, Rab Malhotra, Rudy Bouie

Winner, 2001 White House Closing the Circle Award, Environmental Preferability

As one of the first U.S. Department of Energy (DOE) buildings to pursue certification by the U.S. Green Buildings Council as a Leadership in Energy and Environmental Design (LEED) Building, the Central Supply Facility (CSF) at Argonne National Laboratory (ANL) is pioneering the way for sustainable buildings within DOE. The Title II design, which was completed during Fiscal Year 2000, meets the requirements for Executive Order 13101 for the use of recycled content construction materials, and embellishes numerous environmentally preferable features, including over 15 building materials chosen for their recycled, renewable, or lower-emitting content.

The design also includes several energy conservation features estimated to reduce building electric energy consumption by 20 percent, and natural gas use by 30 percent. This equates to 80,000 kWh/year in electric consumption, and 3,000 therms/year in natural gas, and lowers the building's greenhouse gas impact by 55 tons/year. In addition to building materials and energy performance, the project applies sustainability to site selection and construction practices. The building will be constructed to minimize site impacts and to reduce solid waste during construction.

The combination of strategies employed during the Title II design, including selection of environmentally preferable building materials, incorporation of energy conservation measures, and construction methods that reduce site disturbances and construction impacts, make the CSF project a model for environmental preferability. The significance of this project is even greater when considering the broader applicability across the DOE complex. Already the CSF is being used to develop a reference guide and sustainable design training for ANL project managers. Because the LEED rating system attempts to standardize what constitutes a sustainable building, this project can serve as a helpful case study to other DOE projects interested in benchmarking their design against the nation's best buildings in terms of sustainability.

For more information, contact Keith Trychta, Argonne National Laboratory P2 Coordinator, telephone 630-252-1476, e-mail ktrychta@anl.gov.



Award Winners

Environmental Restoration

*Pollution Prevention by Using a Hammer Drill for Horizontal Directional Drilling
Rocky Flats Field Office, Rocky Flats Environmental Technology Site*

**Nominated Team/Project/Facility: Environmental Restoration
Norma Castenada, Tom Lindsay, Annette Primrose**

The issue of assessing under-building contamination is increasing in importance as more U.S. Department of Energy (DOE) sites approach closure. The Rocky Flats Environmental Technology Site (RFETS) is the first major DOE site to address under-building contamination as part of their environmental restoration program. Horizontal directional drilling is the process typically used to characterize under-building contamination. As originally scoped, the horizontal directional drilling at RFETS was planned to be accomplished using traditional rotary mud drilling methods. This traditional process requires excessive drilling fluids to fill the entire borehole, thereby generating 25 55-gallon drums of liquid low-level-mixed waste (drilling-mud and drill cuttings), plus associated personal protective equipment (PPE) per borehole.

Instead of using this waste-intensive traditional process, RFETS elected to accomplish the horizontal directional drilling by using a hydraulic hammer, which practically eliminates generation of investigation derived waste from the drilling process. This approach results in “zero generation” of drilling-mud and borehole materials. The only wastes generated are excess sample material and minimal PPE. Waste generation is further reduced from traditional rotary methods because splash protection and frequent changing of wet PPE is not required.

Other benefits of the hammer drilling process include minimizing the spread of contamination into other, uncontaminated portions of the borehole, and reducing workers’ exposure to contamination. Because drilling-mud is not circulated throughout contaminated sections of the borehole, the contaminated drilling-mud is not returned to the work area, eliminating this exposure pathway.

The amount of waste generated with the hammer drilling process is minimized to only one to two drums of PPE and excess soil sample media for each borehole. The five planned boreholes at RFETS were expected to result in 125 drums of drilling-mud and cuttings. Utilization of the hammer drilling process will eliminate at least 190 cubic meters of low-level mixed waste, providing a savings of at least \$290,000.

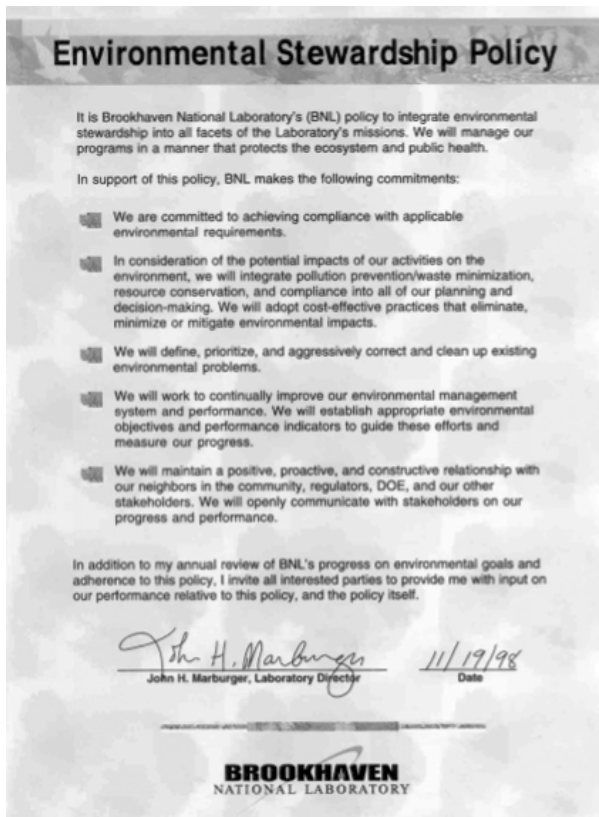
For more information, contact Dave Maxwell, DOE Rocky Flats Field Office, telephone 303-966-4017, e-mail dave.maxwell@rfets.gov.

Award Winners

Excellence in Management

*Environmental Management System Principles Leading Change
Chicago Operations Office, Brookhaven National Laboratory*

Nominated Team/Project/Facility: EMS Principles Leading Change
Dr. John Marburger, Laboratory Director
Dr. Kenneth Brog, Associate Laboratory Director, ESH&Q
Susan L. K. Briggs, EMS Project Manager
George Goode, Process Evaluation Project Manager
Gerald Granzen, Brookhaven Group

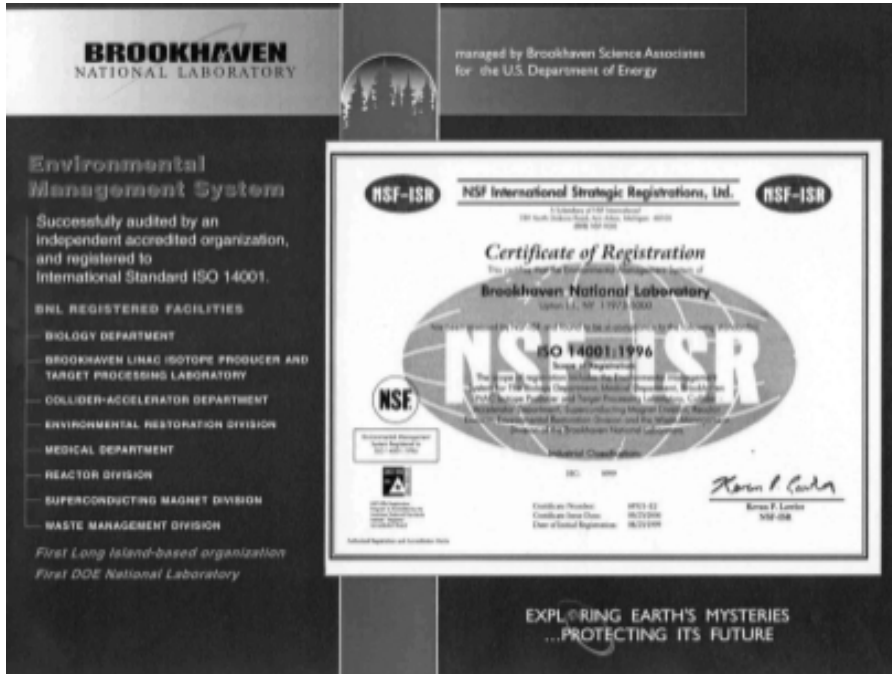


Brookhaven National Laboratory's Environmental Stewardship Policy.

In 1997, Brookhaven National Laboratory (BNL), a U.S. Department of Energy (DOE) high energy physics research facility, discovered tritium in the groundwater beneath its research reactor. The public outcry about the contamination was immediate and intense, eventually leading to termination of the Laboratory's contractor, and intense regulatory scrutiny.

The new Laboratory contractor faced enormous challenges in the environmental area. One was changing the culture and mindset of staff and management with regard to environmental protection. Another was changing operations to fully integrate environmental stewardship into all facets of the Laboratory's missions. Finally, the new contractor needed to change the Laboratory's public image and regain the public trust. BNL, in partnership with DOE, chose a multi-faceted approach to address its historical problems, and to prevent future problems.

One key to the success of this approach was leadership. It was evident that a culture change needed to reach worker attitudes from top management down. The new Laboratory Director, Dr. John Marburger, established an environmental stewardship policy, set Laboratory-wide goals to improve performance, and assigned responsibility and accountability to all staff. Dr. Marburger sent a personal letter to all employees outlining his commitment to environmentally responsible operations and his expectation that



Brookhaven National Laboratory's Registration Certificate.

all staff would participate in this new way of doing business. BNL management, under the direction of Dr. Marburger, decided to go above and beyond what their contract with DOE required, and elected to register the entire site to the International Standards Organization (ISO) 14001 standard.

The BNL program institutionalized management's commitment to environmental compliance

and pollution prevention by implementing the principles of an Environmental Management System, and by developing a community involvement program to maintain a positive, proactive, and constructive relationship with its stakeholders.

BNL has achieved dramatic results in a short three years. Through leadership, training, and internal communications programs, employee awareness of environmental issues has increased. Over 245 pollution prevention opportunities were identified. The cost savings realized from implementing these and previously identified pollution prevention opportunities was more than \$1.6 million in 1999 alone. P2 programs, focused on engineering regulatory requirements out of the operation through material substitutions and process modifications, coupled with a solid compliance assurance program, are improving BNL's compliance status.

Dr. Marburger's commitment set the tone, provided the resources, and established very high expectations, and BNL management and staff delivered. Indeed, under Dr. Marburger's leadership, BNL has come from the brink of environmental disaster to become a recognized leader in the field of environmental protection and community outreach, demonstrating BNL management's commitment to the principles embodied in ISO 14001.

For more information, contact George A. Goode, Brookhaven Science Associates, telephone 516-344-4549, e-mail goode@bnl.gov.

Award Winners

Lifecycle Assessment/Environmental Cost Accounting

*Ozone Depleting Substances Minimization
Savannah River Operations Office, Savannah River Site*

**Nominated Team/Project/Facility: SRS Chiller Replacement Project Team
Jeff McMillan (DOE-HQ) and Eddie Hipp (DOE-SR)**

**The following are Westinghouse Savannah River Company employees:
Thomas Butler, Kevin Scaggs, Richard Bush, John Arbaugh, Joe Fehrenbach,
Frankie Johnson, Russell Snow, Sherri Rudder, Hershah Patel, Fritz Wurzinger,
Larry MacLean, Rick Walters, Rick Lind, Thomas Moczadlo**

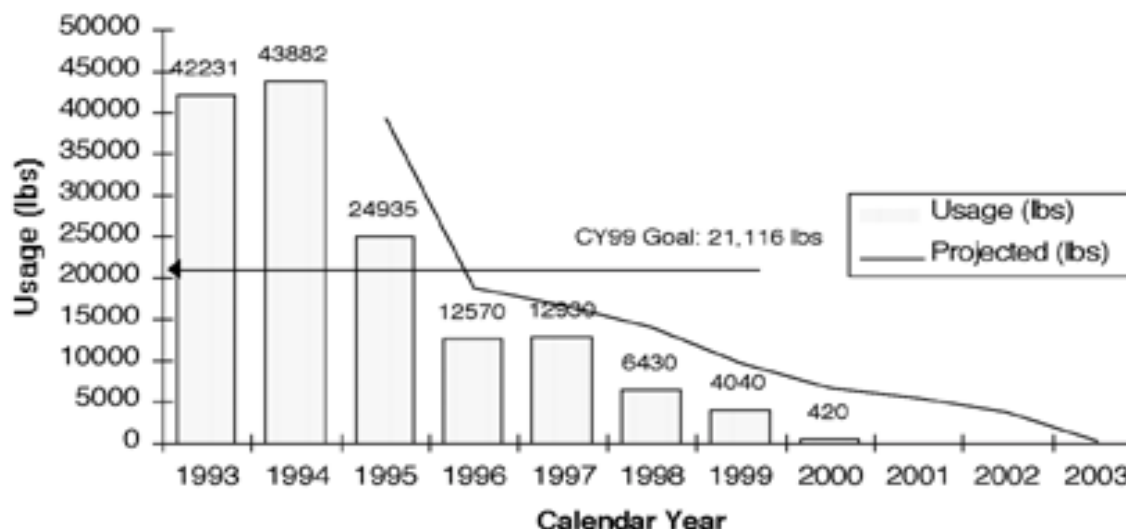
Prior to 1995, the Savannah River Site (SRS) had 51 large units of refrigeration equipment which used chlorofluorocarbon based refrigerants, commonly referred to as Ozone Depleting Substances (ODS). This equipment was located in 36 different facilities at the Site. In 1990, Congress passed the stratospheric ozone protection amendment of the Clean Air Act, specifically Title VI of the Clean Air Act, mandating that ODS Class I refrigerants must be phased out after 1995. Subsequent Executive Orders (EO) have further heightened concern for the phaseout of ODS at Federal facilities.

In order to address the evolving environmental concerns related to ODS refrigerants, SRS began to develop programs to comply with the Clean Air Act regulations. In 1994, the SRS Refrigerant Management Plan was developed, outlining specific actions necessary for the ODS phaseout at the Site. Line Item Project 96-D-471 was subsequently implemented, and has become the hallmark ODS reduction/chiller replacement program within the U.S. Department of Energy.

The project has replaced or consolidated 25 old chilled water units utilizing ODS based refrigerants. The chiller replacements have resulted in a 99 percent reduction in the release of ODS refrigerants to the atmosphere from 1995 to the present. Currently, there is work in progress that will replace or consolidate 22 additional ODS refrigerant chillers by 2002, when Line Item Project 96-D-471 will be complete. Upon completion of Line Item Project 96-D-471, SRS will have met compliance with EO 13148 eight years early, eliminating the annual release of 43,000 pounds of ODS refrigerant into the environment.

The total expected annual energy and cost savings from three of the more significant replacements conducted at SRS to date are 9.51E09 BTU/year and \$170,000/year, respectively. Other work on this project has resulted in additional lifecycle cost savings.

Refrigerant Management Program SRS CFC Refrigerant Usage



Executive Order 12856 calls for a 50 percent reduction in Ozone Depleting Substance emissions by Calendar Year 1999, based on the reference year of Calendar Year 1993. The Calendar Year 1993 reference data is based on Stores disbursement data for CFC -11, -12, -502, and -114 procurement totals. The resulting CFC usage curve represents a 99 percent reduction in CFC usage since 1993.

The resulting benefits of the Line Item Chiller Replacement Project 96-D-471 to DOE and the U.S. taxpayers are:

- Protection of stratospheric ozone by meeting the ODS emission reduction goal set by EO 12856 three years early, and EO 13148 eight years early
- Operation cost reductions due to phaseout of scarce and costly ODS refrigerants
- Operation cost reductions due to installation of more energy efficient chillers,
- Operation/maintenance cost reductions due to installation of state-of-the-art refrigeration equipment
- Improved refrigerant accountability for environmental stewardship

For more information, contact Rick Walters, Westinghouse Savannah River Co., telephone 803-952-7191, e-mail rick.walters@srs.gov.

Award Winners

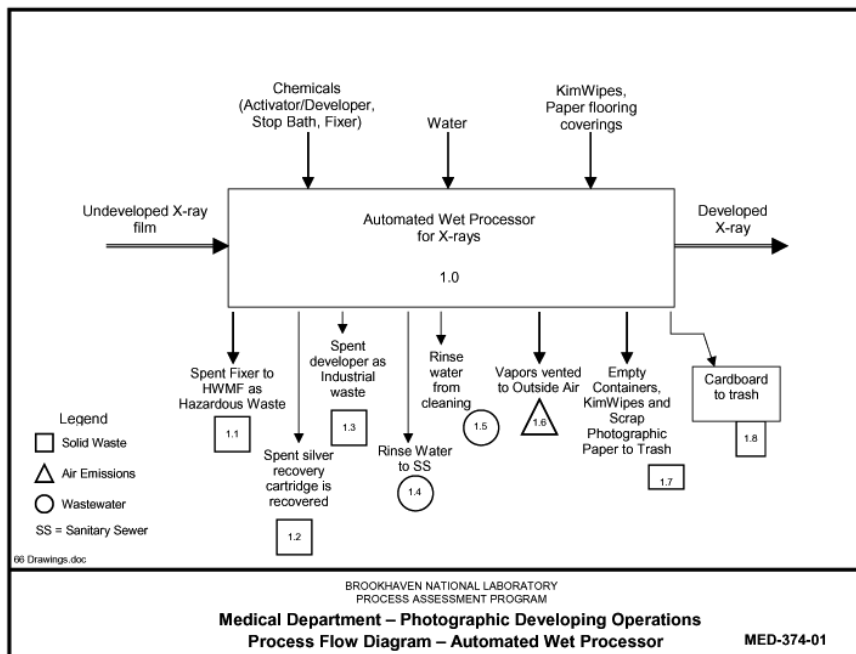
Model Facility Demonstration/ Complex-Wide Achievement

Process Evaluation Project

Chicago Operations Office, Brookhaven National Laboratory

Nominated Team/Project/Facility: Process Evaluation Project

George Goode, Peter Pohlot, Deborah Bauer, Lori Cunniff, John Selva, Gary Schroeder, Andrew Ackerman, Ann Emrick, Diane Cabelli, Douglas Ports, Edward Lessard, James Bullis, John Boccio, John Laurie, Katherine Conkling, Kathy Carney, Kenneth Mohring, Kris Dahms, Martin Woodle, Nichlos Gmur, Patricia Carr, Patricia Williams, Robert DiNardo, Robert Lee, Ronald Gill, Stephen Musolino, Thomas Lambertson, Richard Travis



Photographic Developing Operations Process Flow Diagram.

The Process Evaluation Project (PEP) was a systematic environmental assessment of all waste generating operations and experiments at Brookhaven National Laboratory (BNL). The goal was to evaluate all processes and activities that generate wastes, effluents, or air emissions for the purpose of ensuring that all such wastes, effluents, and emissions are managed in compliance with regulatory requirements. The impetus to conduct the PEP at BNL originated with a voluntary Memorandum of Agreement (MOA) between

the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA), signed on March 23, 1998.

The assessment approach required the direct involvement of hundreds of BNL process owners and researchers. Specialized assessment tools were developed to analyze the environmental impacts of operations. Key among these was a process-mapping technique that graphically depicts the process, and identifies process input materials and output wastestreams. The process maps help to visualize complex processes, and use a mass balance approach to identify wastes, effluents, and air emissions. In total, over 300 process maps were created.

The project was completed ahead of schedule, and the final report was issued in May 2000. In total, over 145 industrial processes (e.g., machining, painting, electronics) and 1,821 research experiments were assessed. Over 245 pollution prevention opportunities were identified, and many have been implemented, resulting in a savings of approximately \$1.6 million in Calendar Year 1999 alone. Many more are being evaluated for technical and economic feasibility in 2000. Additionally, 171 corrective actions were identified during the project, which are being tracked to closure as part of the Environmental Management System (EMS). By the end of Fiscal Year 2000, over 92 percent of the corrective actions were closed, greatly improving BNL's compliance status.

In addition to ensuring compliance, the project has formed the technical basis for environmental aspect/impact analysis, legal requirements that pertain to environmental aspects, and identification of process improvement opportunities, which are all key pieces of BNL's EMS. BNL believes the techniques used to conduct the PEP have wide applicability at other Federal facilities considering EMS registration, and at those facilities seeking compliance with Executive Order 13148.

For more information, contact George A. Goode, Brookhaven Science Associates, telephone 516-344-4549, e-mail goode@bnl.gov.

Award Winners

Model Facility Demonstration/ Complex-Wide Achievement

*DOE Headquarters Pollution Prevention Program
Headquarters, Office of Administrative Management*

**Nominated Team/Project/Facility: Office of Administration Team
Linda G. Sye, Douglas J. Bielan, Louis A. D'Angelo III, Brian D. Costlow,
Mary Anderson, Cherylynn Williams, Kenneth Grossnickle, Don Frizzell,
Edward Danchik, David Wilson, Michael Shincovich, Thomas Clark, Harry Callis,
Amos Street, Logan Watts, Terry Butler, Ammie McCoy**

The U.S. Department of Energy (DOE) Headquarters (HQ) takes seriously its responsibility to reduce the consumption of energy and raw materials, and to minimize the generation of waste. DOE HQ has taken significant steps toward meeting their responsibilities as a means of saving money and protecting the environment, and as a way to lead by example other DOE field operations, as well as the operations of other Federal agencies. The DOE HQ report card for Fiscal Year 2000 reflects a total direct energy cost savings of \$764,000. This equates to eliminating from the atmosphere 84.7 tons of sulfur dioxide, 40.8 tons of nitrous oxide, and 10,612.8 tons of carbon dioxide. Additional direct savings such as reduction of lost work days, recycling revenues, and enhanced facility maintenance practices, etc., are estimated at over \$100,000.

DOE HQ's successes can be found across a spectrum of operations, typical to the headquarter's administration of a cabinet-level department. DOE HQ does not regularly generate hazardous waste; however, many renovation/improvement projects involve the removal and handling of hazardous materials. Hazardous material removal is performed in accordance with Environmental Protection Agency (EPA) and Occupational Safety and Health Act (OSHA) regulations, and removal procedures are used which minimize the amount of waste generated. Many projects have been undertaken at DOE HQ to reduce the generation of waste (by eliminating as much as possible at the source, and by reducing the amount of excess materials introduced into the wastestream), and to reduce the overall release or potential release to the environment of hazardous materials.

This nomination recognizes the work of the Office of Administration Team (MA-22) in seeking, evaluating, and implementing a comprehensive environmental stewardship program at DOE HQ. This program is comprised of air quality initiatives, water and energy conservation activities, environmentally preferable landscaping projects, waste minimization/pollution prevention activities, and affirmative procurement practices.

For more information, contact Brian D. Costlow, Headquarters MA-22, telephone 202-586-4375, e-mail Brian.Costlow@hq.doe.gov.

Award Winners

Recycling

Teaming to Recycle Surplus Electronics Across the DOE Complex

Oak Ridge Operations Office: Idaho National Engineering and Environmental Laboratory, Miamisburg Environmental Management Project (formerly known as the Mound Plant), Fernald Environmental Management Project, Princeton Plasma Physics Laboratory, Bettis Atomic Power Laboratory

Nominated Team/Project/Facility: Oak Ridge Operations Office of Asset Utilization / Community Reuse Organization of East Tennessee / The Oak Ridge National Recycle Center

Richard Meehan, DOE Team Lead Facilities and Materials Reuse

J. T. Howell, DOE Team Lead Reindustrialization

Randall Riggs, DOE Procurement and Contracts

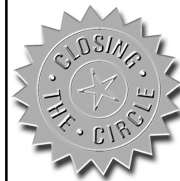
M. Lee Bishop, DOE Program Manager

Christine M. R. Goddard, Pollution Prevention Project Manager, International Technology Corp.

J. Don McFarland, The Oak Ridge National Recycle Center

Lawrence Young, President, Community Reuse Organization of East Tennessee

Winner, 2001 White House Closing the Circle Award, Recycling



Electronic instrumentation at the Miamisburg Environmental Management Project rendered obsolete by technology advances. This equipment was destined for disposal, but the Oak Ridge Operations-managed electronics recycling program diverted this material from the landfill.

The U.S. Department of Energy (DOE) relies on significant numbers of computers, monitors, printers, copiers, and various types of electronic scientific equipment to efficiently accomplish its mission activities. There is a high turnover on this equipment as a result of capacity and performance improvements, rendering the existing equipment obsolete. Downsizing and site closures also contribute to the increasing quantity of surplus equipment. Electronics equipment contains hazardous materials such as lead and other heavy metals, necessitating disposal as hazardous waste. In certain instances, the disposal of electronics generally requires costly macro encapsulation.

In an effort between the DOE Oak Ridge Operations Office of Asset Utilization (ORO AU), the Community Reuse Organization of East Tennessee (CROET), and The Oak Ridge National Recycle Center (TORNRC), tons of obsolete electronics with hazardous components from the Cold War era and beyond are being diverted



Obsolete computer equipment from the Idaho National Engineering and Environmental Laboratory awaiting disposition via the “triage” sorting process to support raw material recovery and recycle/reuse.



Excess electronics equipment collection at The Oak Ridge National Recycle Center, where processing for recycle/reuse takes place.

from disposal. Utilizing innovative technologies and “triage” sorting processes to separate the equipment’s components according to type and value, surplus electronic equipment is being turned into assets through component reuse and raw material recycling.

This unique arrangement allows DOE to recycle its electronics, and to avoid costly disposal by returning valuable resources to the commercial world. It also allows TORNRC to refurbish the electronics for reuse or recycling of the basic components (e.g., plastic, metal, and glass) for profit. Using this strategy, TORNRC is achieving a 99 percent recovery rate on all materials received.

This effort has resulted in the recycling of 1,190 metric tons of electronics, and the development of a new industry, electronics recycling. Recycling will continue to save DOE and taxpayer dollars (\$1.3 million in 2000), and most importantly, will continue to preserve the environment in years to come.

For more information, contact Richard W. Meehan, DOE Oak Ridge Operations, telephone 865-576-2598, e-mail meehanrw@oro.doe.gov.

Award Winners

Return-on-Investment

*Significant Waste Site Source Reduction Using a Small-Diameter Geophysical Logging System
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility:

John April, Bechtel Hanford Inc.

Anna Beard, DOE Richland Operations

Kevin Bergstrom, CH2M Hill

Douglas DuVon, Bechtel Hanford Inc.

Randall Price, Waste Management Technical Services

Russ Randall, Waste Management Technical Services

Jamie Zeisloft, DOE Richland Operations Office



Technicians at the Hanford 100 Area 126-F-1 Ash Pit performing grouting operations with the Small-Diameter Geophysical Logging System.

An unique approach utilizing special instrumentation for in situ characterization of radiological contamination was developed by a team of specialists at the Hanford Site in support of the U.S. Department of Energy's (DOE) High Return-on-Investment (ROI) Pollution Prevention (P2) Program. The instrumentation was designed to collect data on the distribution of subsurface gamma-emitting radionuclides in the vadose zone. For the 126-F-1 Ash Pit project located in the 100 F Area on the Hanford Site, equipment for pushing a small-diameter access hole was combined with a spectral gamma logging system, and integrated into a

single operational system. This system is referred to as the Small-Diameter Geophysical Logging System (SDGLS). At the heart of the SDGLS is the Geoprobe 5400 and a sodium iodide detector configured to fit within the annulus of the probe push rods. The SDGLS provides significant cost savings relative to the current methods of collecting analogous types of data. The SDGLS is portable and easily deployed relative to conventional drilling and logging operations.

The concept behind the SDGLS was to perform source reduction prior to initiating remediation so that the proper planning could be in place to identify contamination before actual excavation. The challenge has always been to perform pre-characterization at lower costs than standard drilling and excavation methods,

coupled with costs for sampling and analysis. The SDGLS technology overcomes this. The detector provides the efficiency necessary to perform gamma spectroscopy that discriminates between man-made and naturally occurring radionuclides at concentration levels needed to address cleanup goals. Another innovation is that the data analysis results for decision making are received in 24 hours, compared to obtaining samples and generating high costs through “quick turn-around” requests to laboratories. It also decreases exposure to workers, and essentially no waste is generated from the investigation activities, which therefore increases the waste minimization over source reduction.

The in situ characterization performed by the SDGLS resulted in a 50 percent reduction in the source term at the 126-F-1 waste site. The total volume reduced was calculated at an impressive 148,000 cubic meters. Total cost savings have been estimated at \$20.3 million, with a ROI of 13,065 percent based on a P2 funding level of \$155,600. This approach could have the same impact at other DOE sites in support of waste site remediation through source reduction and cost savings.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Winners


Return-on-Investment

Super Sleever Portable Sleeving Containment Device
Savannah River Operations Office, Savannah River Site

Nominated Team/Project/Facility: Mr. Roger Brown, High-Level Waste Specialist


The nuclear industry regularly faces the challenge of reducing the number of contaminated items and the amount of radioactive waste they produce. Cords, cables, and hoses carried in and out of radiological areas are typically sleeved in plastic to allow them to be reused, and to avoid their disposal as low-level radioactive waste (LLW). This is a tedious, labor-intensive process. Mr. Roger Brown, a High-Level Waste Division Specialist at the Savannah River Site (SRS), recognized a need for an effective way to perform this operation. Mr. Brown developed, promoted, and found a licensee for a portable sleeving device called the Super Sleever. The Super Sleever is a portable, tubular device that automatically dispenses a protective plastic sleeve over long, narrow objects such as hoses and cables to protect them for use in contaminated areas.

Bartlett Services, Inc.




Super Sleever

60 Industrial Park Road
Plymouth, MA 02360
Tel 508-746-6464 Fax 508-830-3616
www.bartlettinc.com
sleever@bartlettinc.com




The Super Sleever

Bartlett Services, Inc. introduces a new tool for sleeving hoses, airlines and cords.



The device was originally developed and patented by the Department of Energy at the Savannah River Site. The major incentive was to reduce purchases of breathing air hoses. It has now been licensed for commercial applications by Bartlett Services, Inc. The *Super Sleever* is a simple, rugged device that significantly reduces the time and labor required to apply sleeving. Testing has demonstrated that 500 feet of hose, airlines or cords can be sleeved in just 3 minutes with the *Super Sleever* as opposed to 1.5 hours using conventional methods.

The sleeving is presently available in a 3-mil thickness of incinerable yellow polyethylene in 4" and 6" lay-flat widths. These widths will accommodate hose connectors as large as 1.5" and 2.5" diameters respectively.



Super Sleever Technology

If your business involves bringing hoses, airlines or cords into areas with contaminants, hazardous chemicals or toxic materials, you are probably spending money unnecessarily to clean or replace them. You can use the *Super Sleever* to avoid these costs by covering the items with a disposable plastic sleeve.

Sleeving used to be a slow, tedious process that cost more in labor than the hoses or cords were worth. Now, the *Super Sleever* essentially eliminates the labor required to protect your equipment and is an easy way to deal with today's labor shortage conditions.

The cost of cleaning or replacing hoses and cords after each use in a contaminated area can be significant. The *Super Sleever* eliminates that cost by allowing you to use the items over and over again. The cost of sleeving, approximately 8 cents per linear foot, is minimal.

Whether you are currently replacing, cleaning or hand sleeving your hoses, airlines or cords, the *Super Sleever* can save you money.

The Super Sleever product brochure.

The Super Sleever cuts in half the personnel required to manually sleeve objects (one person instead of two), and dramatically reduces the installation time to as little as one-tenth of that needed for traditional methods. Items such as cords, hoses, and air lines are pulled through the Super Sleever at the amazing rate of 200 feet/minute. Using the Super Sleever also eliminates the cost of decontaminating or replacing these items.

SRS uses more than 1.7 million feet of air supply hose each year in radioactively contaminated areas. Incorporation of the Super Sleever device at SRS has the potential to save over \$4 million/year in material reuse, waste reduction, and avoided labor costs, with an estimated LLW reduction of 17,000 cubic feet/year. This project cost \$91,700 in material, training, and procedure changes to initiate across the Site, but over a five year period, the lifecycle savings is estimated at \$13.1 million. The resulting Return-on-Investment is 2,800 percent. In addition to savings from material reuse and waste avoidance, the Super Sleever has had a positive effect on productivity and morale by eliminating the tedium of manual sleeving.

The commercial availability of the Super Sleever is currently reaping tangible benefits for the nuclear industry, with a strong potential to penetrate the medical, hazardous chemical, and asbestos industry. The device is being used at other DOE sites and commercial facilities. It was a winner of the Southeast Federal Laboratory Consortium Award for Excellence in Technology Transfer for 2000.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Winners

Sowing the Seeds for Change

*Digital Signatures for Databases Eliminates Piles of Paperwork
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory*

Nominated Team/Project/Facility: Transuranic Reporting Inventory Processing System (TRIPS)

Ellen Aoki, Wayne Austad (Digital Signature POC) Scott Bauer, Dan Berrett, Nola Boulter, Kim Boyd, Wayne Boyer, Dale Christiansen, Karen Conlon-Empey, Dale Cook, Keven Cook, Scott Cook, Bob Evans, Ray Fink, Gay Gilbert, Ben Groeneveld (formerly INEEL), Diane Hartley, Catherine Herring, Dennis Hollenbeck, Ken Housley, Mark Hughes, John Jenkins, Ray Johnson, Susan Krusch, Ron Larson, Gerry Litterer, Carol Mancuso, Stella Martinez-Piper, Linda Merrick, Greg Miller, Mike R. Miller, Beverly Novak, Rich Oesterling, Barb Peterson (TRIPS Project Manager), Catherine Salazar, Steve Schaeffer, Wyn Schwendiman, N. Clair Smith, David Spencer, Lynda Taleb, Steve Teller, Dave Velloff, Kurt Wagner, Stuart Walsh (formerly INEEL), Rita Wells, Eric Yarger

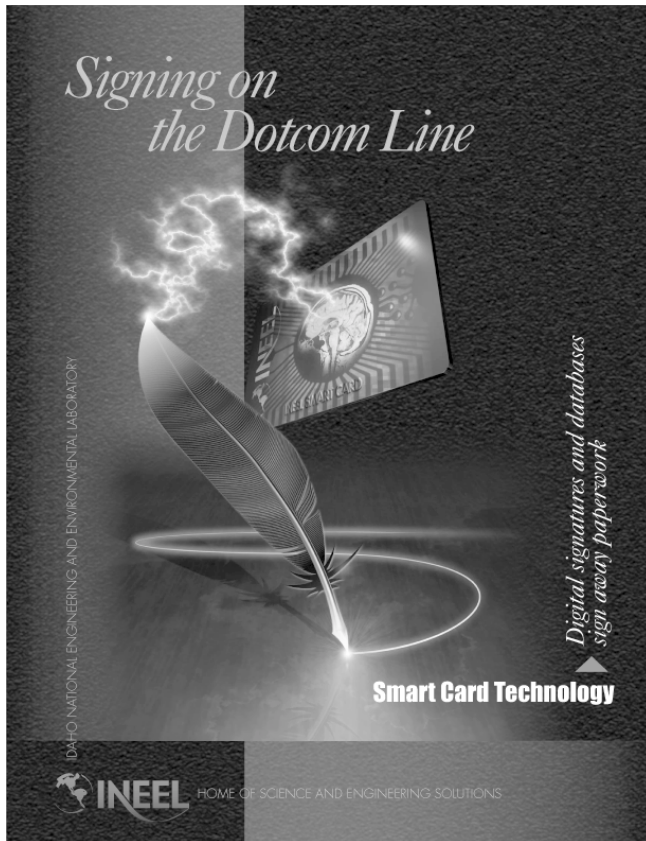
Winner, 2001 White House Closing the Circle Award, Sowing the Seeds for Change

The management of transuranic waste within the U.S. Department of Energy (DOE) framework is extremely data intensive due to a myriad of complex regulatory requirements. The Idaho National Environmental Engineering Laboratory's (INEEL) Radioactive Waste Management Complex (RWMC) collects and independently validates information on approximately 140,000 waste containers. There is a large amount of documentation creating the equivalent of up to 1,000 pages per waste container. At least six levels of data reviews and approvals occur (often more), with different personnel involved at each level, and each level combines the data in a different way. A single 42-drum shipment to DOE's Waste Isolation Pilot Plant (WIPP) may have between 378 and 1,008 separate signatures, depending on how batches for these drums are organized. Verifying the underlying integrity of this high-profile environmental data as it moves up the signature chain is an overwhelming task. For years, this task has been accomplished manually.

The Advanced Information Systems Department at INEEL developed a new, patent-pending, customized computer database application, the Transuranic Reporting Inventory Processing System (TRIPS), to effectively manage the data generation, modification, and review processes necessary for INEEL to ship transuranic waste to WIPP. This process is nearly paperless.

TRIPS provides an electronic toolset to track waste containers, analyze waste characterization, validate data, certify containers, and configure the final payload for shipment through RWMC's complex workflow process. The most notable feature in TRIPS is the "electronic signature," which is a legal substitute for the pen and paper handwritten signature. This is accomplished through the binding of a user's digital identity with the actual data being signed using advanced cryptographic technology. An individual's identity is established





Smart Card technology eliminates paperwork.

record system would cost \$9 million through the year 2002, for the paper handling alone. Based on this successful deployment, the technology is being ported to more general-purpose database applications.

For more information, contact Wayne Austad, Bechtel BWXT Idaho, LLC (BBWI), telephone 208-526-5423, e-mail WQA@inel.gov.

through the combination of a “smart card” and a Personal Identification Number that activates a crypto processor on the smart card. So unlike paper signatures, the digital signature uniquely authenticates both the signer and the actual data that was signed. What makes TRIPS so unique is that the data on the form a user “signs” is stored on multiple database tables within multiple locations on a computer disk. The user “sees” and “signs” the tree forms on limited screens, but the TRIPS technology aligns their signature with all the applicable data stored in the database tables scattered throughout the system.

The electronic signature was key to TRIPS’ approval by WIPP, and is a significant example of integrating the research and development capabilities of INEEL with the needs of operations. The TRIPS system is now in full implementation, and eliminates upwards of 900,000 pages of paper per year, with an estimated per transaction cost savings of up to 85 percent of the paper-based approach. The INEEL Site Program Office estimates a paper-based

Award Winners

Sowing the Seeds for Change

*Implementing a Site-Wide Change through Innovative, Cost-Effective, and Environmentally Sensitive Approaches
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Hanford Railcar Recycling Confirms Innovative Approach to Large Equipment Disposition
Steve Burnum, Wayne Glines, and Anna Beard, DOE Richland Operations
Abe Greenberg and Joel Milsap, Fluor Hanford
Brian Dixon, Brad Roach, and Stan Holloman, DynCorp Tri-Cities
Earl Lloyd and Deanna Klages, Fluor Federal Services
Lee Bishop, DOE Oak Ridge National Metals Recycle
Chris Reno, GTS Duratek
Robert Ward, Bull Run Metal
Robert Orton, Pacific Northwest National Laboratory
Michael Gresalfi, Oak Ridge National Laboratory



Recycle/reuse of large equipment using a triage approach.

The Hanford Site, like many sites across the U.S. Department of Energy (DOE) complex, is confronted with a legacy of contaminated surplus rail and heavy equipment. The Hanford Site Equipment Disposition Project (EDP) was established to dispose of this surplus equipment. Foreseeing an opportunity to strengthen the project's environmental stewardship position, a diverse grass roots team was assembled to challenge the standard practice of strict burial of radiologically and potentially contaminated

large equipment and materials. The team included seasoned experts from numerous DOE sites, DOE contractors, DOE subcontractors, and commercial sector companies.

With a goal of “zero waste” and direction to increase internal recycling and reuse, the team developed an innovative triage approach to sort, segregate, recycle, and reuse as much of the equipment as possible. The EDP team developed the Large Equipment Triage Process (LETP) to focus on sorting and segregating equipment into priority areas for maximizing internal and commercial recycle and reuse. The equipment is fundamentally broken down into individual components to minimize waste, or to maximize reuse options. Equipment is sorted by criteria that includes types and amounts of contamination; surface or volumetric contamination; low-level, hazardous, or both types of contamination. This allows the EDP team to focus on developing an appropriate disposition path for each lot of equipment, based upon specific criteria. By evaluating the options and by focusing on environmental stewardship and cost effectiveness, the equipment components are diverted for reuse rather than buried. The benefits achieved from implementing the LETP in the disposition of large equipment include a paradigm shift from the traditional burial concept, and a promotion of commercial or internal reuse of the equipment.

The LETP has been utilized and refined on several pieces of equipment at the Hanford Site, both small and large, to validate the process. Commercial vendors Duratek, Inc., and Bull Run Metal, provided services and expertise for possible recycle and reuse disposition options, as well as internal recycle pathways with the DOE shield block program. Over the last two years, the LETP has provided a direct cost savings of \$2.6 million from a combination of burial avoidance and revenue retention. Waste reductions of 2,701 cubic meters of low-level radioactive waste and 74 cubic meters of mixed waste were realized.

With declining DOE budgets, cost avoidance is one of the single most important factors driving the triage approach used in defining the disposition path for large contaminated equipment. This approach allows for the systematic disposition of component pieces to maximize value and move up the waste management hierarchy to reuse and recycle, rather than dispose of the whole piece of equipment. Most importantly, the innovative EDP team and the LETP developed for this effort provided the necessary infrastructure change needed to move beyond typical recycle and reuse initiatives into valuable product development and cost-saving procedures. The expertise, ingenuity, and perseverance of the team members were critical to the ultimate success of the team and the process.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Winners

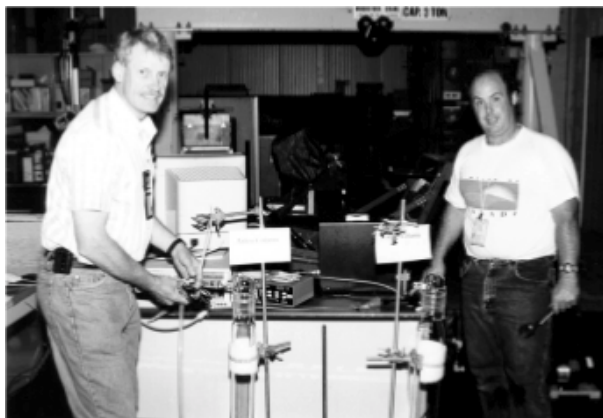
Waste Pollution/Prevention

*Kinking the High-Level Hose: Waste Reduction at the Idaho Nuclear Technology Engineering Center (INTEC) Tank Farm
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory*

**Nominated Team/Project/Facility: Radioactive Liquid Waste Reduction Team
Rick Demmer, Mark Argyle, Kip Archibald, Mike Ancho, V. Jim Johnson**

The current mission of the Idaho Nuclear Technology Engineering Center (INTEC) is to safely and cost effectively manage the radioactive and hazardous waste produced from over 40 years of spent nuclear fuel processing activities at the facility. The Radioactive Liquid Waste Reduction (RLWR) Team has been working to evaluate and implement new methods of waste minimization to solve the problems of waste generation at INTEC.

The RLWR Team developed a Waste Minimization Plan that has been instrumental in dramatically reducing the waste accumulating in the INTEC Tank Farm. The Waste Minimization Plan developed reduction goals and action plans to achieve the goals. Part of the action plan was a long-term look at what testing, development, and other assistance would be needed to implement new waste minimization technologies. The RLWR approach to planning and implementing waste minimization has involved a two part strategy: understanding the waste generation patterns at INTEC, and evaluating, testing, and implementing new processes to institute low waste generating alternatives.



Radioactive Liquid Waste Reduction Team engineers preparing a test of a new chemical decontamination system.



Radioactive Liquid Waste Reduction Team engineers demonstrating a new CO₂ pellet blasting system.

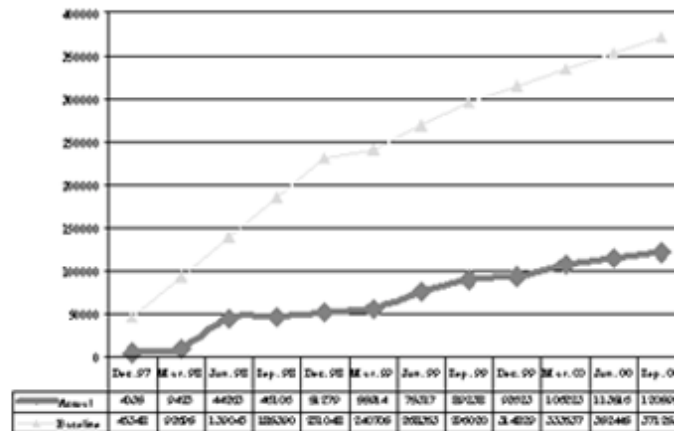
This strategy has the following steps: Evaluate, Educate, and Motivate. The RLWR Team tries to involve the operators, who are going to be using the new technology, in the evaluation phase. By involving them in the early phases of the process, they feel “ownership,” and want to be part of the solution. The RLWR Team also takes a proactive role in training, and in organizing training for the operators. The RLWR group has been successful in establishing monetary incentives to get the new methods implemented.



Waste and Cost Savings

Because of the RLWR team's efforts, the cooperation of operations personnel, and significant incentives paid by the Department of Energy to reduce the generation of tank farm liquid waste, nearly 45,000 gallons of tank farm waste has been avoided in 2000. Not only does that relate to the avoidance of additional tankage and the ability of the High-Level Waste Program to meet state agreements, but it is a significant cost savings as well. The cost for processing the waste being sent to the tank farm is currently estimated to be approximately \$280 per gallon. The contents of the tank farm is scheduled to be evaporated by about 50%, so the total savings for cost purposes is 22,000 gallons; for a total cost savings of as much as \$6.2 million.

Conclusion



FY-98 thru FY-00 Waste Generation

The RLWR team has consistently provided the leading force behind the liquid waste reduction success at INTEC over the past year. The team's ability to continually push the envelope in searching for and trying new waste reduction techniques and technologies has led to positive feedback from stakeholders, regulators, and most importantly, the process operators. The dedication of this team to reduce liquid waste is demonstrated in the dramatic results.

Waste reduction success at the Idaho Nuclear Engineering Center Tank Farm.

Through a coordinated program of evaluation, testing, incentives, procurement, training, and troubleshooting, the RLWR Team has "kinked the hose" by reducing waste entering the INTEC tank farm by nearly 45,000 gallons, or a 58 percent reduction in liquid waste. Not only does that relate to the avoidance of additional tankage and the ability of the High-Level Waste Program to meet state agreements, but it is a significant cost savings as well. This waste reduction provided a cost savings of over \$6.2 million in 2000.

The RLWR Team has consistently provided the leading force behind the liquid waste reduction success at INTEC over the past year. The RLWR Team's ability to continually push the envelope in searching for and trying new waste reduction techniques and technologies has led to positive feedback from stakeholders, regulators, and most importantly, the process operators. The dedication of this Team to reduce liquid waste is demonstrated by the dramatic results.

For more information, contact Rick Demmer, BBWI High-Level Waste Programs, telephone 208-526-3412, e-mail rickd@inel.gov.

*2001 DOE
Pollution
Prevention
Runner-Up
Award Winners*

Runner-Up Award Winners

Education and Outreach and Information Sharing

*Chemical Waste Minimization in the Educational Laboratory
Chicago Operations Office, Argonne National Laboratory - East*

Nominated Team/Project/Facility: Chemical Waste Minimization in the Educational Laboratory Team

During Fiscal Year 2000, the Illinois Waste Management and Research Center (WMRC), a state agency, and the Argonne National Laboratory-East jointly conducted a project entitled, "Chemical Waste Minimization in the Educational Laboratory." Chicago area secondary schools voluntarily participated in this project. The purpose of the project was to promote the integration of waste minimization and pollution prevention strategies within secondary schools by presenting microscale chemistry lectures and demonstrations to high school chemistry teachers, and by performing chemical vulnerability assessments within high school chemistry laboratories. Argonne's Division of Educational Programs provided demonstrations and training on microscale chemistry techniques, and the WMRC performed chemical vulnerability assessments within each of the participating high schools. The project successfully provided each school with the tools (training, assessments, and recommendations) needed to address existing chemical material/waste concerns and issues (i.e., generation and disposal).

For more information, contact Keith Trychta, Argonne National Laboratory P2 Coordinator, telephone 630-252-1476, e-mail ktrychta@anl.gov.

Runner-Up Award Winners

Environmental Preferability

*Reuse Systems at the Pacific Northwest National Laboratory
Richland Operations Office, Pacific Northwest National Laboratory*

Nominated Team/Project/Facility: Pacific Northwest National Laboratory

Winner, 2001 White House Closing the Circle Award, Environmental Preferability

The most environmentally preferable purchasing is to avoid purchasing. One way to avoid purchasing is to “purchase” used materials at no cost. The Pacific Northwest National Laboratory (PNNL) has adopted these two principles of environmental preferability into their business operations. In Fiscal Year 2000, PNNL established systems for funneling demolition materials and used office products back “on the market.” These two endeavors resulted in the avoidance of nearly 1,400 metric tons of waste, with a cost savings/avoidance in excess of \$200,000.

For more information, contact Sandra Cannon, Pacific Northwest National Laboratory, telephone 509-525-8849, e-mail sandra.cannon@pnl.gov.



Runner-Up Award Winners

Environmental Restoration

*Preparing for High Flux Beam Reactor Facility Stabilization
Chicago Operations Office, Brookhaven National Laboratory*

Nominated Team/Project/Facility: Reactor Division Facility Stabilization Team

Following the shutdown of the High Flux Beam Reactor, staff took the initiative to prepare the facility for decommissioning by finding alternative uses and innovative disposal paths for as much material and equipment as possible. The complex contained many hazardous/radioactive substances that were no longer needed, and would have required disposal as waste. Over \$300,000 in disposal costs were eliminated, in addition to the unmeasured avoided costs of recipients who did not have to purchase materials given to them. External auditors have acknowledged these pollution prevention efforts as a noteworthy practice, and a model for all future decommissioning activities.

For more information, contact George A. Goode, Brookhaven Science Associates, telephone 516-344-4549, e-mail goode@bnl.gov.

*Advanced Cone Penetrometer Tool Used for Contaminated Waste Dump Characterization
at the Nevada Test Site
Nevada Operations Office, Nevada Test Site*

Nominated Team/Project/Facility: CAU 143 Team

An advanced Cone Penetrometer Tool (CPT), incorporating a gamma-ray spectrometer and an in-situ volatile gas sampling and analysis system, was used to identify the nature and extent of contaminants of potential concern in over one half mile of waste disposal units; to determine the extent of vertical and horizontal contaminant migration; to reduce the potential for personnel exposure to radiological and hazardous contaminants; and to target the locations for confirmation sampling using a rotosonic drill. The CPT expedited the characterization process, and eliminated the generation of investigation derived waste, saving approximately \$250,000 in site characterization, waste packaging, and disposal costs.

For more information, contact Carol Shelton, DOE Nevada, telephone 702-295-0286, e-mail shelton@nv.doe.gov.

Runner-Up Award Winners

Environmental Restoration

*A National Process for Cost-Effective Equipment Reuse
Ohio Field Office, Miamisburg Environmental Management Project
(formerly known as the Mound Plant)*

Nominated Team/Project/Facility: The DOE Ohio-Mound Site, National Center of Excellence, Equipment Transfer and Reuse Team

Thousands of government-owned buildings contain large quantities of excess, yet operable, contaminated equipment that has no identified future use. Equipment of this kind is presently labeled as “waste,” and is then buried at licensed disposal sites. A team of government and commercial members implemented an equipment reuse process on several occasions in Fiscal Year 2000 that accomplished the safe and cost-effective reuse of such surplus equipment at other Federal and commercial sites. The use of this standardized process on the “Main Hill Tritium Project” saved \$1.4 million, and accelerated the critical path of this closure site project by 32 days.

For more information, contact Dr. Michael J. Gresalfi, Oak Ridge National Laboratory, telephone 301-742-2566, e-mail gresalfimj@ornl.gov.

Runner-Up Award Winners

Excellence in Management

*Innovative Pollution Prevention Concepts Applied to Laboratories
Richland Operations Office*

Nominated Individual: Mr. Bertrand Griffin II

Mr. Bertrand Griffin II has provided exemplary management skills to the Analytical Service Project P2 program, demonstrating commitment to reduction of waste through implementation of innovative laboratory methods, recognition of resources, and commitment to implement low waste volume instrumentation in Hanford laboratories. His responsibilities include preparing reports to management, working with recycling and source reduction concepts, and training to heighten the pollution prevention awareness of the technical workforce. In the unique environment of the laboratory, effective use of the laboratory workforce and an approach to brainstorming ideas has been utilized with a high degree of success through the pollution prevention opportunity assessment process.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Runner-Up Award Winners

Model Facility Demonstration/ Complex-Wide Achievement

*A Systems Approach to Pollution Prevention: ESA Machine Shop, Los Alamos National Laboratory
Albuquerque Operations Office, Los Alamos National Laboratory*

Nominated Team/Project/Facility: ESA Machine Shop, Los Alamos National Laboratory

In the early 1990s, the Los Alamos National Laboratory's ESA Machine Shop produced numerous wastestreams, ranging from scrap paper to radioactive scrap metal and hazardous industrial chemicals. Since 1993, managers and workers have initiated facility-wide waste prevention procedures that reduce or eliminate wastestreams, while developing a new environmental ethic exemplified by operational practices that go far beyond regulatory compliance. Due to management and employee commitment, the Shop now minimizes waste and associated costs through conscientious planning, purchasing, and recycling, while developing environmentally-oriented operational procedures; invests in new technologies and shares them with other facilities; and serves as a leader in waste prevention.

For more information, contact Thomas P. Starke, Environmental Stewardship Office, LANL, telephone 505-667-6639, e-mail tps@lanl.gov.

*Y-12 National Security Complex Maintenance Recycling Initiatives
Oak Ridge Operations Office, Y-12 National Security Complex*

Nominated Team/Project/Facility: Y-12 Maintenance Organization

During Fiscal Year 2000, the Y-12 National Security Complex's Maintenance Organization successfully implemented 11 recycle projects. The implementation of these projects has reduced approximately 10,138 metric tons of industrial and RCRA regulated hazardous waste, for an estimated cost savings/avoidance of \$517,351. As a result of these and past initiatives, the Maintenance Organization has decreased the number of RCRA/TSCA regulated areas from 119 to seven since 1995. Over the past five years, the Y-12 Maintenance Organization has implemented over 65 new and ongoing recycling projects, resulting in the reduction of 72,628 metric tons of waste, with an estimated annual cost savings/avoidance of \$3.3 million.

For more information, contact Eva F. Irwin, Site Services, telephone 865-241-2581, e-mail exi@ornl.gov.

Runner-Up Award Winners

Model Facility Demonstration/ Complex-Wide Achievement

*Hanford's Return-on-Investment Program Saves Millions of Dollars
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Hanford's Return-on-Investment Team

Hanford's High Return-on-Investment (ROI) Program has successfully saved over 209,000 cubic meters of waste, \$166 million in cost savings/avoidance, and an average ROI of 3,300 percent, through the implementation of 59 ROI projects. Richland has developed and refined a process to screen ROI proposals for implementation of only the most prosperous ideas. The process includes identification of initiatives, training, proposal preparation, review and acceptance, monthly and close-out reports. The continuing success of the Hanford P2/WMin Program is an example of solid teamwork, responsible leadership, and direct participation of all the Hanford Site contractors and the DOE P2/WMin Team members.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Runner-Up Award Winners

Recycling

*Implementing Reuse Options for Potential Hazardous Wastes
Oakland Operations Office, Stanford Linear Accelerator Center*

Nominated Individual: Ms. Yolanda Pilastro

Ms. Yolanda Pilastro and her staff have successfully implemented several waste reduction opportunities in managing hazardous waste at the Stanford Linear Accelerator Center (SLAC). Ms. Pilastro has been instrumental in working with various organizations to send potential wastes to those parties who can reuse or reclaim them as materials. In turn, the costs associated with managing these materials as hazardous waste through permitted offsite treatment, storage, and disposal facilities are avoided. Over the past three years, Ms. Pilastro has diverted a total of over 60 metric tons of potential hazardous waste, and has saved SLAC and DOE an estimated \$260,000 in avoided costs.

Mr. Richard Cellamare, Stanford Linear Accelerator Center, telephone 650-926-3401,
e-mail rcellamare@slac.stanford.edu.

*Hanford Recycling Program Improvements
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Hanford Infrastructure Recycling Programs

Winner, 2001 White House Closing the Circle Award, Recycling

Hanford's Recycling Programs administered by DynCorp Tri-Cities Services, Inc. (DYN), have been enormously successful in terms of cost savings and volume of materials recycled. During Fiscal Year 2000, \$1,349,504 was saved in life cycle costs by recycling 1,622 metric tons of sanitary waste from the Hanford Site, primarily through Recycling Programs. This total represents 60.7 percent of the sanitary waste generated at Hanford, nearly twice the recycling goal established by DOE. Successes are not limited to sanitary waste. Through DYN administered recycling and waste reduction efforts, \$813,140 was saved in life cycle costs by recycling 37.3 metric tons of hazardous waste.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472,
e-mail Anna_V_Beard@rl.gov.



Runner-Up Award Winners

Recycling

A Cooperative Effort to Recycle Leaded Glass

Rocky Flats Field Office, Rocky Flats Environmental Technology Site

Nominated Team/Project/Facility: Building 371 Project

The disposal path for material that cannot be sold or transferred for reuse is well entrenched at the Rocky Flats Environmental Technology Site (RFETS), where time is a critical factor in material disposition.

Approximately 31,000 pounds of non-radioactively contaminated leaded glovebox glass was destined for hazardous waste disposal because it lacked certificates required for reuse as a safety item. However, disposal was avoided when RFETS workers arranged to transfer the glass to Lawrence Berkeley National Laboratory (LBNL) for use in making glass awards. Staff at both sites collaborated for recycling, saving RFETS \$7,000 in disposal costs, and enabling the acquisition of useful material at LBNL.

For more information, contact Dave Maxwell, DOE Rocky Flats Field Office, telephone 303-966-4017, e-mail dave.maxwell@rfets.gov.

Runner-Up Award Winners

Sowing the Seeds for Change

*Argonne National Laboratory - East Green Solvent Pilot Project
Chicago Operations Office, Argonne National Laboratory - East*

Nominated Team/Project/Facility: ANL-E Green Solvent Pilot Project Team

During Fiscal Year 2000, three internal programs at Argonne National Laboratory-East teamed with two private companies to complete a two-phased pilot study that evaluated the use of “green” solvents within typical machine shop parts cleaning and degreasing operations. This effort was a groundbreaking project, in that it is one of the first pilot studies to evaluate the use of bio-based solvents in a typical machine shop parts cleaning and degreasing setting. Prior to this pilot study, there was little information available on the performance and recoverability of bio-based solvents in comparison to currently used hydrocarbon-based or chlorinated solvents. The green solvents used during this pilot study were ethyl lactate and Vertec Gold™, a fifty-fifty blend of ethyl lactate with soy methyl ester (methyl soyate). The results of this study found the green solvents to be extremely effective when used within typical machine shop parts cleaning and degreasing operations. In addition, the green solvents were found to be relatively easy to recover. The findings of this study are to be used to promote the long-term and expanded use of “green solvents” as a substitute for hydrocarbon-based or chlorinated solvents in machine shop parts cleaning and degreasing operations throughout the public and private sectors.

For more information, contact Keith Trychta, Argonne National Laboratory P2 Coordinator, telephone 630-252-1476, e-mail ktrychta@anl.gov.

Runner-Up Award Winners

Waste Pollution/Prevention

*Chipping Away at Waste for Wildfire Management
Albuquerque Operations Office, Los Alamos National Laboratory*

Nominated Individual: Ms. M. Diana Webb

The Los Alamos National Laboratory established a 250-acre fuel break along its western perimeter. Wood products from this fuel break were distributed as firewood or chipped for mulch, rather than being landfilled or burned, preventing over 95 tons of air pollutants from entering New Mexico skies, and keeping 600 tons of waste out of the landfill. A waste generation tax funded the \$20,000 chipping effort. Avoided landfilling costs were nearly \$81,000. This fuel break played a major part in reducing damage from the Cerro Grande Fire.

For more information, contact Daniel Pava, Los Alamos National Laboratory, telephone 505-667-7360, e-mail dpava@lanl.gov.

*Improved Wastewater Quality/Pollution Reduction
Albuquerque Operations Office, Los Alamos National Laboratory*

Nominated Team/Project/Facility: TA-50 Radioactive Liquid Waste Treatment Facility Treatment Upgrades Team

The Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Facility (RLWTF) has been in operation since 1963. This facility currently treats approximately 20 million liters of radioactive waste per year. In response to increasingly stringent effluent water quality standards, LANL and the U.S. Department of Energy (DOE) designed and installed new treatment processes at the RLWTF. In March 1999, tubular and centrifugal ultrafiltration units and a reverse osmosis treatment unit were brought online at the RLWTF. In December 1999, an electro dialysis reversal unit began to volume reduce reverse osmosis concentrate. In January 2000, an evaporator became operational, and further reduced the volume of secondary wastes generated at the RLWTF. As a result of the process additions, for the entire Calendar Year of 2000, the RLWTF was in compliance with all Federal (National Pollutant Discharge Elimination System permit), State (Groundwater Discharge plan), and Department of Energy effluent quality standards (Derived Concentration Guidelines). During Calendar Year 2000, the RLWTF reduced the amount of total dissolved solids typically discharged to the environment through its permitted National Pollutant Discharge Elimination System outfall by 10,100 kilograms (1,000 kilograms of which was nitrate-nitrogen). Additionally, the amount of radioactive material discharged in Calendar Year 2000 was 94 percent less than was discharged in Calendar Year 1999.

For more information, contact Mike Saladen, University of California, LANL, e-mail saladen_michael_t@lanl.gov.

Runner-Up Award Winners

Waste Pollution/Prevention

*Strategic Petroleum Reserve Waste/Pollution Prevention through the Vehicle Replacement Pilot Program
Office of Fossil Energy, Strategic Petroleum Reserve*

Nominated Team/Project/Facility: Strategic Petroleum Reserve Vehicle Replacement Pilot Program – DOE/DM E2P2 Team

An aggressive vehicle replacement team successfully integrated pollution prevention into the site and GSA fleet vehicle replacement program, achieving the following benefits:

- A 100 percent reduction in air pollutants generated from nine on-site electric vehicles
- A highly visible success model demonstrating the feasibility of the analysis effort, and source reduction compatibility with actual field requirements

This program is another step toward satisfying presidential, regulatory, customer, and community pollution prevention requirements. Encouraged by this, the team researched and ordered nine ultra low emission Liquid Propane Gas (LPG) powered pick-up trucks, continuing the source reduction effort.

For more information, contact David J. Folse, DynMcDermott Petroleum Operations Company EF-83, telephone 504-734-4013, e-mail david.folse@spr.doe.gov.

*Application of Sanitary Biosolids on the Oak Ridge Reservation
Oak Ridge Operations Office, Oak Ridge National Laboratory*

Nominated Team/Project/Facility: Biosolids Working Group

Traditionally, sanitary sewage sludge generated at the Oak Ridge National Laboratory's (ORNL) sewage treatment plant contained levels of radioactivity that precluded its use as a soil amendment. Instead, 56,000 gallons per year of sludge was dried and disposed as solid low-level waste (SLLW). For the past six years, ORNL's Biosolids Working Group has been working to change this. Through perseverance, hard work, and a lot of patience, the sources of the radionuclides that were entering the sanitary sewage treatment plant were identified and eliminated. Sewage sludge is now land applied on the Oak Ridge Reservation at a savings of \$18,000 per year, eliminating 155 cubic feet of SLLW per year.

For more information, contact Susan Michaud, UT-Battelle/ORNL, telephone 865-576-1562, e-mail sun@ornl.gov.

Runner-Up Award Winners

Waste Pollution/Prevention

Complex-Wide Lead Reuse Initiative

Oak Ridge and Oakland Operations Offices,

Oak Ridge National Laboratory and Pacific Northwest National Laboratory

Nominated Team/Project/Facility: Oak Ridge Operations Office of Asset Utilization and Pacific Northwest National Laboratory

To meet Secretary of Energy Richardson's mandate for internal reuse and recycling of scrap materials, the National Center of Excellence for Metals Recycle initiated an innovative program for recycling contaminated lead into lead-lined containers. The first demonstration of this program involved the recycling of 21 tons of contaminated lead into waste storage containers, achieving a direct cost savings of over \$100,000 in disposal and fabrication costs. The program is being expanded Complex-wide as a means for helping DOE to avoid the burial of over 26,000 tons of potentially contaminated lead, and to achieve an expected cost savings of \$5 million per year.

For more information, contact Marvin E. Bennett, DOE Oak Ridge Operations, telephone 865-576-0853, e-mail bennettme@oro.doe.gov.

Value Methodology: An Outstanding Tool for Assessing Waste Minimization Opportunities at Hanford

Richland Operations Office, Hanford Site

Nominated Team/Project/Facility:

Steve R. Parikh, Bechtel Hanford, Inc.

Doug K. DuVon, Bechtel Hanford, Inc.

Jamie H. Zeisloft, DOE Richland Operations Office

Bechtel Hanford, Inc. (BHI) consistently seeks to enhance waste minimization efforts at the Hanford Site. BHI and the U.S. Department of Energy, Richland Operations Office, teamed to identify areas of environmental restoration activities that could lead to potential waste volume reductions. The wastestreams identified for potential volume reduction were analyzed through a dynamic Value Methodology approach (synonymous with Value Engineering), resulting in the development of specific Waste Minimization/Pollution Prevention Opportunities. The waste reductions accomplished through these efforts resulted in \$42 million and \$23 million in cost savings/avoidance for Fiscal Year 1999 and Fiscal Year 2000, respectively.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Runner-Up Award Winners

Waste Pollution/Prevention

*Hanford's Waste Reduction through Process Changes in Maintenance of Submarine Reactor Compartments
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Submarine Reactor Compartment Paint Project Team

In 1999, the United States Navy requested that Hanford preserve (paint) 20 defueled Reactor Compartments, and perform partial preservation of an additional 35 defueled Naval Reactor Compartments disposed at Trench 94 in the 200 West Area. The initial preservation of eight Reactor Compartments supplied information leading to process improvements for the preservation of the remaining 12 Reactor Compartments. The process improvements reduced waste generation and improved labor savings. These process improvements led to an annual reduction in solid hazardous waste generation of approximately 51 metric tons, with an annual cost savings/avoidance of \$1,191,000.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

*Applied Pollution Prevention in Design: Tritium Facility Modernization Projects
Savannah River Operations Office, Savannah River Site*

Nominated Team/Project/Facility: Tritium P2 Design Team

Two Savannah River Site (SRS) project design teams, the Tritium Extraction Facility (TEF) and the Tritium Facility Modernization and Consolidation (T-CON), achieved their goals of minimizing waste generation, improving worker protection, promoting resource conservation, and serving as role models for SRS on integrating pollution prevention and sustainable design principles. Both projects completed pollution prevention design assessments, and identified pollution prevention opportunities estimated at over \$21 million in cumulative cost savings. Their success is attributed to a strong commitment to the methodology by the design teams. Management and peer recognition of their success has helped the Pollution Prevention (P2) Design Coordinator expand the use of design assessment tools at SRS.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Runner-Up Award Winners

Waste Pollution/Prevention

*Segregation and Diversion of Non-Radioactive Waste from Low-Level Waste
at the Savannah River Site
Savannah River Operations Office, Savannah River Site*

Nominated Team/Project/Facility: Clean Waste Diversion Team

Waste composition analysis of the Savannah River Site's (SRS) low-level radioactive job control wastestreams identified that a significant portion (up to 80 percent) was non-radioactively contaminated. Two pilot low-level radioactive waste segregation and reclassification projects proved the feasibility of diverting clean waste from radioactive waste. These pilot programs ran for about nine months in Fiscal Year 2000, and cumulatively avoided approximately 5,800 cubic feet of low-level radioactive waste, saved in excess of \$500,000, and established protocols and support for Clean Waste Diversion Program continuation and expansion in Fiscal Year 2001.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

*2001 DOE
Pollution
Prevention
Award
Nominations*

Award Nominations

Education and Outreach and Information Sharing

Increase Community Recycling Awareness through Active Participation Albuquerque Operations Office

Nominated Individual: Mr. Harish Sharma

Mr. Harish Sharma has given numerous pollution prevention lectures for engineering course credit at New Mexico State University. Mr. Sharma has also written a chapter in a handbook titled, "The Handbook of Pollution Control and Waste Minimization," for release in mid-2001. He authored a 55-page document titled, "Living With Nature," that deals with human sustainable development. Mr. Sharma moderated a technical session at the "Recycle 2000 Conference" sponsored by Southwest Public Recycling Association, he is an active Board Member of two state-wide non-profit organizations, and he is an Executive Committee Board Member of "2000 New Mexico Recycling Day." Although Mr. Sharma's primary occupation is not pollution prevention, he devotes his spare time to the subject within many local community organizations in order to increase recycling for the benefit of the environment.

For more information, contact Harish Sharma, Albuquerque Operations Office, telephone 505-845-4275, e-mail hsharma@doeal.gov.

Partnering with the Community Towards Environmental Excellence Albuquerque Operations Office, Kansas City Plant

Nominated Team/Project/Facility: Kansas City Plant

The Kansas City Plant has joined with community environmental stakeholders to increase public awareness of environmental issues, and to educate the community regarding the steps they can take towards pollution prevention and environmental excellence. This involvement with environmental stakeholders consists of associates serving in leadership positions on local and state environmental boards of directors, steering committees, and participating in community environmental events. Through these examples, the Kansas City Plant has clearly demonstrated its involvement in the community, promoting understanding of environmental issues, encouraging people to take simple steps toward pollution prevention and environmental excellence.

For more information, contact Bob Beauchamp, Honeywell, FM&T, telephone 816-997-3586, e-mail rbeauchamp@kcp.com.

Award Nominations

Education and Outreach and Information Sharing

*Sharing the Benefits of Recycling, Buying Recycled, and Pollution Prevention with the Community
Chicago Operations Office, Princeton Plasma Physics Laboratory*

Nominated Team/Project/Facility: Princeton Plasma Physics Laboratory

DOE's Princeton Plasma Physics Laboratory (PPPL) hosted three major events in Fiscal Year 2000. The Laboratory participated in events and meetings sponsored by the local community. The events stressed the tangible benefits of recycling, buying recycled, and pollution prevention. The goals were to increase the awareness level of the benefits of recycling, buying recycled, and pollution prevention, and to increase the actual participation level of PPPL employees and the external community. These efforts have raised the PPPL mixed solid waste recycling rate to approximately 40 percent in Fiscal Year 2000 and Fiscal Year 1999, and the buy recycled rate to 80 percent in Fiscal Year 1999, and 91 percent in Fiscal Year 2000. The external response to the PPPL sponsored Earth Week Poster Contest is that annually over 1,000 local school students participate.

For more information, contact Thomas J. McGeachen, PPPL P2/WMin Coordinator, telephone 609-243-2948, e-mail tmcgeach@pppl.gov.

*Community Sharing of Pollution Prevention through Chemistry Applications
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: 222-S Health and Safety EXPO Committee

The 222-S Analytical Laboratory participated in the Fiscal Year 2000 Hanford Health and Safety EXPO. This exposition was designed to foster health and safety awareness at the Hanford Site, and to provide outreach and safety ideas to the local community. The Laboratory demonstrated safety and health in handling various applications, and demonstrated waste reduction and pollution prevention principles for waste disposal, for households, industry, and for the Site. The Laboratory was honored for its role.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Nominations

Education and Outreach and Information Sharing

*Teaming for Success: Pollution Prevention Week Promotion
Richland Operations Office*

Nominated Individual: Ms. Dionetta Freeman

National Pollution Prevention Week (P2 Week) is celebrated throughout the nation during the last full week in September. In September 2000, Fluor Hanford Pollution Prevention/Waste Minimization (P2/WMin) teamed with DOE's Richland Operations Office, the City of Richland, and Home Depot to sponsor P2 Week in the local community. The week's activities were highlighted by a week-long promotion of environmentally-friendly products by vendors at the local Home Depot store. In addition, Home Depot held a Kid's Day event, in which children from the community were educated in pollution prevention through a magic show and coloring contest.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Nominations

Environmental Preferability

Thinning the Forest: A Strategy for Wildfire Management
Albuquerque Operations Office, Los Alamos National Laboratory

Nominated Individual: Ms. M. Diana Webb

Commencing in 1996 after the Dome Fire, the Los Alamos National Laboratory (LANL) began thinning trees and reducing fuels around key facilities to reduce the threat of future catastrophic wildfires. Thinning also helped achieve LANL's forest management objective to have a diverse and healthy forest. The strategy paid off during the recent Cerro Grande Fire, when damage to LANL lands and facilities was minimized, key facilities were saved, and the Laboratory was able to avoid additional monetary losses. Pollution from burning forests and facilities, and water quality impacts were lessened, and in some cases avoided.

For more information, contact Daniel Pava, ES&H-20, telephone 505-667-0760, e-mail dpava@lanl.gov.

Sacking of the INEEL: New Technology Provides Major Cost Savings in Radioactive Waste Disposal
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory

Nominated Team/Project/Facility: Idaho National Engineering and Environmental Laboratory Waste Generator Services

The Idaho National Engineering and Environmental Laboratory (INEEL) has historically disposed of low-level radioactive waste in rigid containers, such as wooden and metal boxes. In an effort to dispose high-volume soil/debris more cost-effectively and to conserve disposal space, soft-sided containers were implemented. Compared to rigid containers, using soft-sided containers results in a 10-to-1 generator procurement cost savings, as much as a 50 percent reduction in disposal space, and a significant reduction in labor and administration costs. In addition, soft-sided containers are easier to use, and reduce future disposal pit subsidence (settling) and closure cap breach (sinking) problems.

For more information, contact Robert Piper, BBWI - Waste Generator Services, telephone 208-526-4702, e-mail rp8@inel.gov.

Award Nominations

Environmental Preferability

*Waste Minimization by Elimination of Sodium Interferences for ICP-AES, ICP/MS, and IC Methods, in Lieu of Environmental Penalties
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Hanford Supplemental Environment Project Team

A novel legal approach to resolution of penalties resulting from environmental infractions has been agreed upon through the teaming efforts of Fluor Hanford Corporation, the Richland Department Operations Office of the Department of Energy, and Region 10 of the Environmental Protection Agency. This approach has a direct impact on the environment. In lieu of monetary penalties assessed for waste discrepancies found at the Hanford Site, a laboratory waste minimization project was planned and initiated. An analytical procedure for removing sodium interference from tank samples has been proposed for evaluation and implementation. This project was also nominated in the “Sowing the Seeds for Change” category.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

*Under-Building Remediation
Rocky Flats Field Office, Rocky Flats Environmental Technology Site*

Nominated Team/Project/Facility: Building 771 Closure Project

Demolition planners projected at least 200 cubic meters of secondary waste resulting from the final phase in the demolition of a former plutonium processing facility. Planners sought environmentally preferable alternatives to traditional demolition processes. Decommissioning planners developed a new paradigm in which soil remediation is conducted simultaneously with the demolition, avoiding two major secondary wastestreams, steel plates and a secondary weather structure. This innovative approach is expected to reduce 200 cubic meters of waste, and to save close to \$6 million on this project alone. This process can be used for other deactivation and decommissioning (D&D) projects, and improves traditional D&D procedures.

For more information, contact Dave Maxwell, DOE Rocky Flats Field Office, telephone 303-966-4017, e-mail dave.maxwell@rfets.gov.

Award Nominations

Environmental Preferability

*Savannah River Site Containment Fabrication Facility
Savannah River Operations Office, Savannah River Site*

Nominated Team/Project/Facility: Savannah River Site Containment Fabrication Team

The Savannah River Site Containment Fabrication Facility (CFF) manufactures custom-designed, high-quality radiological and hazardous material contamination containment devices (glovebags, huts, and catch containments) for use in complex system invasive work. The CFF custom designs and fabricates containments for each specific job, delivers the finished product in a short turn-around time, supports job planing with innovative ideas, and makes on-the-spot modifications at the job site, as requested by the customer. CFF containment use, an environmentally-preferable option to standard containments, avoided approximately 2,700 cubic feet of contaminated waste in Fiscal Year 2000, and saved approximately \$350,000.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Nominations

Environmental Restoration

G-Pit Source Removal Action
Oak Ridge Operations Office, East Tennessee Technology Park

Nominated Team/Project/Facility: K-1070-C/D Burial Ground G-Pit Team

The K-1070-C/D Burial Ground G-Pit was the major source of groundwater contamination at the East Tennessee Technology Park, in Oak Ridge, Tennessee. This contaminated groundwater plume surfaced in an onsite creek, causing an elevated risk to human health and the environment. By excavating the contents of the G-Pit, the major source of volatile organic compounds, polychlorinated biphenyls (PCBs), and technetium-99, were removed from the plume, thus eliminating the risk to human health and the environment.

For more information, contact John A. Lea, Bechtel Jacobs Company LLC, telephone 865-241-1239, e-mail leaja@bechteljacobs.org.

Reuse of Supernate for Gunitite and Associated Tanks Sludge Transfers
Oak Ridge Operations Office, Oak Ridge National Laboratory

Nominated Individual: Mr. Darrell Daugherty

Supernate from Gunitite and Associated Tanks (GAAT) sludge transfers is decanted to the Melton Valley Storage Tank-Capacity Increase, where it is maintained in segregated storage. The supernate is reused in subsequent sludge transfers from GAAT. Approximately 200,000 gallons will be reused, which will avoid the generation of approximately 40,000 gallons of liquid low-level radioactive waste concentrate. A total cost avoidance of \$1,732,000 was achieved during Fiscal Year 2000.

For more information, contact Susan Michaud, UT-Battelle/ORNL, telephone 865-576-1562, e-mail sun@ornl.gov.

Award Nominations

Environmental Restoration

Efficient Waste Minimization in Laboratory Closure

Oak Ridge Operations Office, Oak Ridge Institute for Science and Education

Nominated Team/Project/Facility: Vance Road Facility Cleanout Project Team

Cleaning and vacating former research facilities is very costly, and often results in the storage of materials in underground facilities, thus a waste of the environment. The Oak Ridge Institute for Science and Education's Environmental Safety & Health Office created a solution that saves months of time and manpower, hundreds of thousands of dollars, and most importantly, thousands of cubic yards of valuable and limited storage space. The new process resulted in the saving of 3,200 cubic feet of underground storage space, the reuse in lieu of disposal of \$1.2 million in equipment, and a savings of over \$820,000 in time and manpower costs. The project serves as a model program for cleanup and vacating projects across the country.

For more information, contact Tom Wantland, Oak Ridge Institute for Science and Education (ORISE), telephone 865-576-3333, e-mail wantlant@ornl.gov.

Advanced Characterization System Reduces Waste at the Source

Richland Operations Office, Hanford Site

Nominated Team/Project/Facility: Bechtel Hanford, Inc., Radiological Control

The Advanced Characterization System was designed to minimize the quantity of low-level radioactive waste generated in association with decontamination and demolition activities at the Hanford Site. The Environmental Restoration Contract, operated by Bechtel Hanford, Inc., is tasked with decontamination and demolition, and environmental restoration activities at the Hanford Site, including the "cocooning" of nine former plutonium production reactors. The Advanced Characterization System, operating with a Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)-based survey protocol, surveyed and released two-thirds of the 105-D Reactor. This survey identified 1,300 cubic meters of material that can instead be used as backfill, or shipped as non-radioactive waste.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Nominations

Environmental Restoration

*Remediation of the Savannah River Site's Mixed Waste Management Facility Tritium Plume
Savannah River Operations Office, Savannah River Site*

Nominated Team/Project/Facility: Mixed Waste Management Facility Project Team

The Savannah River Site Environmental Restoration Division had to reduce the tritium effluent flowing into Four Mile Branch from the Mixed Waste Management Facility groundwater plume. Tritium is the most difficult radioactive constituent to remediate in groundwater, since there is no effective technology to separate the two. The project team developed and received regulatory approval for the innovative, yet simple, solution of impounding the water at the seepage line, and using the water to irrigate the surrounding trees. The majority of the tritiated water dissipates through evapotranspiration and radionuclide decay, tree growth is increased by 30 percent in the area of irrigation, and zero radioactive waste is generated.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Nominations

Excellence in Management

*Pollution Prevention Champion
Headquarters, Office of Environmental Management*

Nominated Individual: Mr. David G. Huizenga

The Pollution Prevention Program within the U.S. Department of Energy is a team effort, consisting of Headquarters policy leadership, and effective field implementation. Since 1999, senior management authority for the DOE-wide Pollution Prevention Team, EM-22, has rested with Mr. David G. Huizenga, Deputy Assistant Secretary, Office of Environmental Management. Mr. Huizenga is a true champion of pollution prevention, and he has worked diligently to reverse several years of declining Headquarters attention and budget support for field pollution prevention programs. During the year 2000, Mr. Huizenga worked with the Deputy Secretary and other DOE senior managers to prevent shutdown of DOE's Pollution Prevention Return-on-Investment (ROI) program. Due to his efforts, the Deputy Secretary conducted a workshop with Departmental Secretarial Offices in June 2000 that resulted in 21 ROI projects being funded DOE-wide. This infusion of \$6 million to implement Pollution Prevention Return-on-Investment Projects in Fiscal Year 2001 for Environmental Management, Office of Science, and Defense Programs sites has helped rejuvenate pollution prevention activities at Headquarters and in the field.

For more information, contact Kent Hancock, Headquarters, Pollution Prevention Team, EM 22.3, telephone 301-903-1380, e-mail kent.hancock@em.doe.gov.

Award Nominations

Model Facility Demonstration/ Complex-wide Achievement

*Driving Ahead to Excellence at the Idaho National Engineering and Environmental Laboratory
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory*

Nominated Team/Project/Facility: Idaho National Engineering and Environmental Laboratory Fleet Operations Team

Fleet Operations is responsible for coordinating and maintaining a DOE-owned multipurpose vehicle and maintenance fleet of over 1,600 pieces of equipment. Management initiative, employee empowerment, and Integrated Safety Management System integration have resulted in significant energy efficient and waste minimization progress towards Federal pollution prevention goals. Fleet Operations' reputation for excellence has produced partnerships with various private and state institutions, and extends internationally to Japan, Canada, and England. This nomination demonstrates how the quest for excellence and teaming by all employees can make a small operation a highly recognized and sought after international research partner.

For more information, contact Wendy Faler, Fleet Operations BBWI, telephone 208-526-8840,
e-mail wyc@inel.gov.

*Metals and Ceramics Division Promotes Pollution Prevention
Oak Ridge Operations Office, Oak Ridge National Laboratory*

Nominated Team/Project/Facility: Metals and Ceramics Division

The Oak Ridge National Laboratory's Metals and Ceramics Division has been a strong supporter of pollution prevention for many years. The Division's management has encouraged each division member to assess their processes, and to implement modifications to reduce all types of waste. In the past eight years, the Metals and Ceramics Division has implemented approximately 19 projects reducing sanitary, hazardous, air emissions, and low-level radioactive waste. The Metals and Ceramic Division received one of the first Headquarters Return-on-Investment Project funding awards for the Waste Building Filter Exhaust Reduction - Building 4500S (X034), which reduced low-level mixed waste by 300 kg. The Metals and Ceramics Division also won the Environmental Preferability Award for the Utilization of Non-Lead Ammunition at the Central Training Facility (X166) in Fiscal Year 2000.

For more information, contact Susan Michaud, UT-Battelle/ORNL, telephone 865-576-1562,
e-mail sun@ornl.gov.

Award Nominations

Recycling

*Recycling of Gamma Ray Detector Housings
Albuquerque Operations Office, Los Alamos National Laboratory*

**Nominated Team/Project/Facility: Los Alamos Neutron Science Center
Facility Management and Physics Division Partnership**

A partnership between the Los Alamos Neutron Science Center and the Physics Divisions at Los Alamos, plus the Laboratory's Education Equipment Gift Program, sent over 200 gamma ray detector housings, affectionately known as "shmoos," to the California Institute of Technology for reuse. It is estimated that this recycling effort saved between \$150,000 and \$200,000, and saved over 200 cubic meters of landfill space. Other materials, such as wooden skids and lead shielding, were either reused or identified for recycle, rather than being disposed.

For more information, contact John Graham, LANL, LANSCE-FM, telephone 505-665-4666, e-mail cgraham@lanl.gov.

*Recycling Standards and Reagents for Laboratory Research
Richland Operations Office, Hanford Site*

**Nominated Team/Project/Facility: Hanford Analytical Services Project
Hazardous Materials Group and Standards Laboratory**

The preparation of standards at the Hanford Analytical Services Project Standards Laboratory involves precise makeup of known concentrations of chemical materials in solid soil, salt matrices, and simulated tank liquids. These standards are often composed of hazardous and mixed radioactive and hazardous constituents that are rare treasures for research laboratories. In an effort to recycle unneeded standards and reagents that would otherwise require hazardous material disposal, recycling was initiated by the Hanford Hazardous Materials Group. One thousand rare and common standard materials are being staged for transfer to laboratories, schools, and universities, or have already been shipped.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Nominations

Return-on-Investment

*Y-12 National Security Complex Radioactive/Resource Conservation and Recovery Act Regulated Wastewater Elimination Project Part 1
Oak Ridge Operations Office, Y-12 National Security Complex*

Nominated Team/Project/Facility: Radioactive/Resource Conservation and Recovery Act Regulated Wastewater Elimination Project Part 1

The Y-12 Plant contains a network of dikes and tanker-trailer staging areas open to the elements, with the dikes being pumped after significant rains. Contaminated water is transferred to tankers as chemical and/or radiological waste in a 45-day average disposal cycle. Actual results of this project show a 86 percent reduction in rainwater collected. The project estimates the volume of treatable chemical and/or radioactive wastewater has been reduced at two existing liquid collection sites by 166,000 gallons (628 cubic meters) per year. This will reduce the resource burden for sampling, pumping, pre-treatment storage, and hauling, thus reducing the number of tanker-trailers and personnel engaged in liquid waste handling.

For more information, contact Eva F. Irwin, Site Services, telephone 865-241-2581, e-mail exi@ornl.gov.

Award Nominations

Sowing the Seeds for Change

Sowing the Seeds for Change

Albuquerque Operations Office, Waste Isolation Pilot Plant

Nominated Individual: Ms. Cindy Woodin

The Waste Isolation Pilot Plant (WIPP) has a reputation of a strong safety and environmental culture. This culture embraces many aspects of a pollution prevention program. One of WIPP's biggest pollution prevention challenges is meeting the Secretary of Energy's 1999 sanitary wastestream reduction goals. Ms. Cindy Woodin, Pollution Prevention Coordinator, has been instrumental in using a number of awareness techniques and program emphases to expand the scope of the WIPP "safety" culture, to include some non-traditional elements of pollution prevention, thereby reducing existing sanitary wastestreams.

For more information, contact Cynthia Zvonar, U.S. DOE Carlsbad Field Office (CBFO), telephone 505-234-7495, e-mail zvonnarc@wipp.carlsbad.nm.us.

Sustainable Design Implementation Plan

Chicago Operations Office, Argonne National Laboratory - East

Nominated Team/Project/Facility: Argonne National Laboratory – East Sustainable Design Team

The Facilities Engineering and Construction Department at Argonne National Laboratory has developed a Sustainable Design Implementation Plan that promotes environmentally preferable building materials and construction methods at the Argonne National Laboratory - East, while sowing the seeds of change DOE-wide through leadership and information sharing. The program, which can be easily adopted by other sites, includes policy, a NEPA checklist, specification changes, procurement guidance, documentation, training, and incentives for design staff. By implementing the plan, the Facilities Engineering and Construction Department will divert waste from the landfill; reduce facility energy use, resource consumption, and operating costs; improve indoor air quality; and stimulate an economy for sustainable products and services.

For more information, contact Keith Trychta, Argonne National Laboratory P2 Coordinator, telephone 630-252-1476, e-mail ktrychta@anl.gov.

Award Nominations

Sowing the Seeds for Change



*Affirmative Procurement Policy Development
Headquarters, Office of Procurement Policy and Assistance*

Nominated Individual: Mr. Richard Langston

Winner, 2001 White House Closing the Circle Award, Sowing the Seeds for Change

The Department of Energy is proud of its environmentally preferable purchasing program, also known as "Affirmative Procurement." Fiscal Year 2000 data indicates that DOE is purchasing an impressive 85 percent of the EPA-listed items with recycled content. Mr. Richard Langston, of DOE's Headquarters Office of Procurement Policy and Assistance, has provided strong leadership to help DOE to achieve this goal. Mr. Langston wrote a policy distributed by DOE's Senior Procurement Executive to all DOE contracting organizations to guide their implementation of "Greening the Government" Executive Orders 13101 and 13123.

For more information, contact Susan Weber, Headquarters, Pollution Prevention Team, EM 22.3, telephone 301-903-1388, e-mail Susan.Weber@em.doe.gov.

*Waste Cops at the Idaho National Engineering and Environmental Laboratory:
Arresting Product/Material Before It Becomes Waste
Idaho Operations Office, Idaho National Engineering and Environmental Laboratory*

Nominated Team/Project/Facility: Waste Generator Services

Waste Generator Services was fully implemented at the Idaho National Engineering and Environmental Laboratory in Fiscal Year 2000. Waste Generator Services is a reengineering effort that streamlined the waste acceptance process, and provided waste generators with turn-key waste management services through a single, accountable organization to manage and disposition wastes in a timely, cost-effective, and compliant manner. The successful implementation of the Waste Generator Services approach addressed the waste-handling problems created by multiple organizational interfaces, the poor definition of organization and personnel roles and responsibilities, limited organizational and personnel accountability, and unclear performance expectations.

For more information, contact Jeff Mousseau, Waste Generator Services, telephone 208-526-8053, e-mail mou@inel.gov.

Award Nominations

Sowing the Seeds for Change

*DOE/Nevada Pollution Prevention Manual
Nevada Operations Office*

Nominated Team/Project/Facility: DOE/Nevada Pollution Prevention Team

The DOE/Nevada Pollution Prevention Manual was developed as an innovative approach to understanding and implementing Pollution Prevention (P2) requirements. At DOE/Nevada, it was determined that many organizations did not fully understand their P2 responsibilities, or how to implement P2 requirements and methods for reporting accomplishments. Although requirements had been established through Executive Orders, Environmental Laws, and DOE Directives, the diversity of these requirements seemed to inhibit the everyday employee from fully understanding his/her responsibilities. For these reasons, the DOE/Nevada Pollution Prevention Manual was developed, following the requirements found in DOE Policy 251.1, Directive System.

For more information, contact Carol Shelton, DOE Nevada, telephone 702-295-0286, e-mail shelton@nv.doe.gov.

*Oak Ridge Reservation Sowing the Seeds for Change
Oak Ridge Operations Office, Oak Ridge Reservation*

Nominated Individual: Ms. Anne C. P. Ostergaard

Ms. Anne C. P. Ostergaard has provided continuous exemplary support to the Oak Ridge Pollution Prevention Programs since 1984. During this time period, Ms. Ostergaard has been a leader in providing and disseminating information among the three Oak Ridge Reservation sites, which has ensured consistent reporting of regulatory and DOE required information. This activity has sowed the seeds of change by ensuring that the three sites report information in a consistent manner, rather than just being an island reporting only their specific data, and not sharing data. This has enabled many of the reports to be completed more efficiently and accurately, as the three sites plan their activities to ensure that the required information can be collected prior to due dates. In addition to her work for the Oak Ridge Reservation, Ms. Ostergaard also obtained her Masters Degree. Her thesis was performed at the Oak Ridge National Laboratory, and it identified and quantified pollution prevention opportunities and related costs within the Metals and Ceramics Division, and evaluated and detailed trends that are unique to a laboratory setting.

For more information, contact Eva F. Irwin, Site Services, telephone 865-241-2581, e-mail exi@ornl.gov.

Award Nominations

Sowing the Seeds for Change

*Waste Minimization by Elimination of Sodium Interferences for ICP-AES, ICP/MS, and IC Methods, in Lieu of Environmental Penalties
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Hanford Supplemental Environmental Project Team

A novel legal approach to resolution of penalties resulting from environmental infractions has been agreed upon through the teaming efforts of Fluor Hanford Corporation, the Richland Department Operations Office of the Department of Energy, and Region 10 of the Environmental Protection Agency. This approach has a direct impact on the environment. In lieu of monetary penalties assessed for waste discrepancies found at the Hanford Site, a laboratory waste minimization project was planned and initiated. An analytical procedure for removing sodium interference from tank samples has been proposed for evaluation and implementation. This project was also nominated in the “Environmental Preferability” category.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

*Hanford's Strategy for Meeting the Secretary of Energy and Hanford Site Pollution Prevention Goals
Richland Operations Office, Hanford Site*

Nominated Team/Project/Facility: Pollution Prevention Team

In 1996, the Secretary of Energy announced an initiative to reduce by 50 percent the routine generation of low-level radioactive waste, low-level mixed waste, hazardous waste, and Toxic Chemical Releases. Additionally, goals were established to reduce sanitary waste generation by 33 percent, to recycle 33 percent of the sanitary waste, and to increase procurement of EPA-designated recycled content products to 100 percent. In order to ensure these goals were met, the Hanford Site developed and annually updates an effective strategy and plan for meeting the Secretary's Pollution Prevention Goals.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

Award Nominations

Sowing the Seeds for Change

*Savannah River Site Contaminated Large Equipment Disposition Program
Savannah River Operations Office, Savannah River Site*

Nominated Team/Project/Facility: Contaminated Large Equipment Team

The Savannah River Site is storing over 2,500 pieces of spent contaminated large equipment (CLE) resulting from past operations, with a total disposal volume exceeding 600,000 cubic feet. The CLE Team completed characterization of 85 percent of this legacy waste, and developed a cost-effective strategy to disposition this material that results in over \$90 million in life-cycle cost avoidance. Management approved this strategy in the Fiscal Year 2001 Annual Operating Plan. Reversing the long-standing “no action” policy of the Site, and establishing an implemented process for CLE disposition, has “Sowed the Seed for Change” for the Savannah River Site.

For more information, contact Tim Coffield, WSRC, telephone 803-557-6316, e-mail tim.coffield@srs.gov.

Award Nominations

Waste Pollution/Prevention

Production and Reuse of Uranyl Nitrate from Waste Sludges Oak Ridge Operations Office, East Tennessee Technology Park

Nominated Individual: Mr. Bill Huxtable

Approximately 1,000 gallons of pure depleted uranyl nitrate hexahydrate (0.2 wt% U-235) concentrate were produced by dissolving sludges in depleted uranyl waste drums, generated by Oak Ridge National Laboratory fuel recycle activities in the 1970s. To date, about 200 gallons of this concentrate have been successfully used by both the TSCA Incinerator and the ETTP Legacy Waste Storage Project to downblend fissile wastes for easier long-term management. Production, bulking, shipment, treatment, and disposal avoidance costs for the waste, and the replacement cost for this concentrate, are estimated to have saved at least \$50,000.

For more information, contact Mr. I. W. Jeter, Weschem, telephone 865-574-4009, e-mail iwj@ornl.gov.

Y-12 National Security Complex Billet Quench Enclosure Project Oak Ridge Operations Office, Y-12 National Security Complex

Nominated Individual: Mr. Michael W. Bailey

The billet quench enclosure is used to spray water onto hot billets during the quenching process. The water used is drained from the enclosure into a sump. Once entering the sump, the water is managed, processed, and treated as a low-level radioactive wastewater. This project proposed an enhanced quench enclosure to capture and recycle the quench water. The basic arrangement is to place a storage tank under the quench enclosure to capture the water. A pump is then used to provide flow from the tank to the spray nozzles in the top of the quench enclosures. The project estimates reducing 90,720 kg of low-level radioactive wastewater annually.

For more information, contact Eva F. Irwin, Site Services, telephone 865-241-2581, e-mail exi@ornl.gov.

Award Nominations

Waste Pollution/Prevention

*Sludge Removal from Wastewater
Richland Operations Office*

Nominated Team/Project/Facility: 200 Area Effluent Treatment Facility Filter System

Sludge buildup in the Load-In Facility tanks and in the Liquid Effluent Retention Facility impoundment presented corrosion problems, and costly annual impoundment cleanup requirements. A filter system was installed to prevent the buildup of sludge in the tanks and the retention facility. This resulted in an annual volume reduction of 3.8 cubic meters of low-level mixed waste, and 1,900 cubic meters of liquid waste generation. Annual clean-out of the retention facility was eliminated, and the facility realized a \$310,000 annual cost savings.

For more information, contact Anna V. Beard, DOE Office of Site Services, telephone 509-376-7472, e-mail Anna_V_Beard@rl.gov.

