



United States Department of Energy

# 2004 Pollution Prevention Award



## Office of Environmental Management Best in Class

### Idaho National Engineering and Environment Laboratory

**Lead Program Project** recycled 99 metric tons of radioactively contaminated lead into lead bricks for use at the Idaho State University Accelerator Center

**Nitrate Recycling** recycled rather than disposed 11,200 pounds of laboratory-grade sodium nitrate and 4,130 pounds of ACS-grade potassium nitrate

**Oil Bypass Filter  
Technology Evaluation**  
conserved 185 gallons of oil in one year through using oil bypass filters on fleet diesel buses



### Hanford Site

#### **Mortar-lining Project for Water Distribution**

avoided 6,000 metric tons of waste by refurbishing rather than replacing 28 miles of waterline



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### Office of Environmental Management Best in Class Savannah River Site

**P2 Outreach and Employee Awareness Program** recognizes Ms. Sarita Berry for championing P2 at the site and in the community

**Manganese Nitrate Substitution Avoids High-Level Waste Generation** reducing high-level waste by over 16,000 pounds by substituting manganese nitrate for ferrous sulfamate as a supplemental neutron poison

#### **Comprehensive Recycle Options**

recycled 4,700 metric tons of materials and started alternative fuel system to convert paper waste to biomass fuel cubes

#### **Energy Savings Performance Contract Exemplifies Life Cycle Cost Assessment**

exceeding DOE P2/E2 goals through EMS/P2 implementation in all contracts

#### **P2 Implementation in Closure**

**Business Unit** avoided generating over 2,000 cubic meters of low-level radioactive waste





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### Office of Energy Efficiency and Renewable Energy Best in Class

### National Renewable Energy Laboratory

#### **Sustainable NREL: New Buildings Program**

implemented design policy that exceeds Model Energy Code by 30%; recent buildings exceed the code by 50%

#### **Sustainable NREL: Recycling Program**

increased recycling rate by 15% in one year through integrating recycling throughout all operations



#### **Sustainable NREL: Education, Outreach and Information Sharing**

integrated P2 into internal and external websites, traveling exhibits, print products, and employee-input opportunities



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### Office of Fossil Energy Best in Class

### Strategic Petroleum Reserve

**Achieving a Positive EMS Return on Investment** reduced exploration and production petroleum waste by over 24 million pounds through EMS implementation



### National Energy Technology Laboratory

**Positive Experiences in Undergoing ISO-14001 Certification** reduced non-hazardous waste by 67% and hazardous waste by 92% against 1993 baseline by modeling its EMS after ISO-14001



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### Office of Civilian Radioactive Waste Management Best in Class

### Yucca Mountain Project

#### Minimizing the Copy Hog

achieved a 30% reduction in paper use

#### Greening Property

**Management** recycled/reused 98% of 10,000 tons of materials in a four-month period

#### Employing Environmental Accountability and Aspect Integration into Day-to-Day Decision-Making and Long-Term Planning

incorporated sustainable design and environmental accountability through culture change and an EMS





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## National Nuclear Security Administration Best in Class



### Los Alamos National Laboratory

#### Formamide Replacement in Genetic Sequencing

eliminated a hazardous waste stream by substituting formamide with a water-based solution

### Y-12 National Security Complex

#### Innovative Roadway Paving Application

reused asphalt materials instead of buying 2,825 metric tons of gravel and eliminated 2,825 metric tons of industrial waste through integrating P2 in all phases of roadway resurfacing





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### National Nuclear Security Administration Best in Class

### Sandia National Laboratories/NM

**Sustainable Design Integrated Educational Series** conducted seven workshops for 289 design and construction professionals on all aspects of the environmental performance of buildings

**Construction Waste Recycling** diverted disposal of over 80% of waste material from new building construction

**Five Keys to Success: Continuous Improvement for Construction Purchases** increased purchases of construction material containing recycled content by 40% through contract requirements and training





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### National Nuclear Security Administration Best in Class Savannah River Site

**Tritium Hot Calibration Laboratory** eliminated a waste stream by developing a facility to maintain and calibrate tritium-contaminated instrumentation systems

**Design Assessments for the Pit Disassembly & Conversion Facility** identified and analyzed 33 sustainable design/P2 opportunities across facility's lifetime





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**Office of Science  
Best in Class**

**Battelle Memorial Institute**



### **Corporate Commitment to Environmental Stewardship and Enhanced EMS**

Brookhaven National Laboratory, Oak Ridge National Laboratory, and Pacific Northwest National Laboratory experienced substantial improvements in accountability, hazard and waste reductions, cost savings and compliance through EMSs that go beyond the ISO-14001 standard



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### Office of Science Pollution Prevention and Environmental Stewardship Award

### Brookhaven National Laboratory

**Mixed Waste Elimination Through  
Process Modification** reduced waste  
by 90% and eliminated a mixed waste stream  
by investigating P2 alternatives

**Microplate Scintillation Counter  
Reduces Mixed and Radioactive Waste**  
by 90% and reduces count times by 90%





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### Office of Science Pollution Prevention and Environmental Stewardship Award

### Fermi National Accelerator Laboratory

#### Scintillator Plastic Recycling

resulted from proactive thinking and annually avoids disposing 36,000 to 72,000 pounds of plastic as waste

#### Alternative Fuel Initiatives

increased percentage of Alternatively Fueled Vehicles to 26% and increased E85 fuel accessibility to reduce petroleum-based fuel use by 20%





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### Office of Science Pollution Prevention and Environmental Stewardship Award

### Oak Ridge Institute for Science and Education

#### Reduction of Perchloric Acid in the Analysis of Alpha Emitting Isotopes

eliminated 30 kilograms of hazardous waste annually and reduced analytical turn-around times by 40% through a pollution prevention opportunity assessment





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### Office of Science Pollution Prevention and Environmental Stewardship Award

### Oak Ridge National Laboratory

#### Waste Water Reduction Activities

eliminated generating 190,000 gallons of wastewater annually, increased operational flexibility, and decreased leak potential

#### Integration of Environmental Sustainability Principles

resulted in policies and practices leading to compliance, environmentally sustainable funding investments, and reduced resource use and waste generation





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### Office of Science Pollution Prevention and Environmental Stewardship Award

### Stanford Linear Accelerator Center

### Education of Chemical Management Systems to the DOE Complex

resulted in a chemical use and hazardous materials management culture change spearheaded by Lawrence (Butch) Byers as he promoted the chemical management system

**STANFORD LINEAR  
ACCELERATOR CENTER**  
OPERATED BY STANFORD UNIVERSITY FOR THE  
DEPARTMENT OF ENERGY



# 2004 White House Closing the Circle Award

U.S. Department of Energy Award Winners

## Battelle Memorial Institute

Commitment to environmental stewardship and environmental management systems



## Sandia National Laboratories/NM

Commitment to increasing the use of construction materials containing recycled content



# 2004 White House Closing the Circle Honorable Mention

U.S. Department of Energy Award Winners

## Yucca Mountain Project

Commitment to reducing  
paper use



## Strategic Petroleum Reserve

Commitment to  
EMS implementation