

U.S. Department of Energy
Quarterly Teleconference on Implementing
Environmentally Preferable Purchasing Requirements
October 27, 2005 11 a.m. - 12:30 p.m. (EDT)

TOPICS

- Debut of DOE Environmentally Preferable Purchasing website
- Walk through of the FY2005 reporting and award nomination websites
- Discussion of biobased absorbent, biobased/recycled coolant, recycled viewgraphs, life cycle analysis of toner cartridges

PARTICIPANTS:

DOE HEADQUARTERS PREFERRED PROCUREMENT PROGRAMS: Don Lentzen, Richard Langston, Brett Goldsmith

DOE-HQ Other: Michael Raizen, Kevin Groppe

OTHER FEDERAL AGENCIES:

Nuclear Regulatory System: Patrick Dodd

Office of the Federal Environmental Executive: Dana Arnold

U.S. Environmental Protection Agency: Sue Nogas, Sam Sasnett

CIVILIAN RADIOACTIVE WASTE MANAGEMENT

Yucca Mountain Project: Joyce Stephens, Doni Allman, Marcelle Brown,

ENVIRONMENTAL MANAGEMENT

Miamisburg: Joanna Wilson

Office of River Protection: Gae Neath

Richland Operations Office: Tom Ferns

Hanford Site: Ed Foss, Candace Marple

Waste Isolation Pilot Plant: Judy McLemore, Bob Prentiss

West Valley: Jerald Hoch, Herman Moore

FOSSIL ENERGY:

National Energy Technology Laboratory: Marsha Stiles

LEGACY MANAGEMENT

Grand Junction Site: Julie Hendricks, Paul Wetherstein

NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY

Idaho National Engineering and Environmental Laboratory: Anne Dustin

SCIENCE

Chicago Office Integrated Science Center: Roberta Ahlberg, Cynthia Anderson, Tony Bindokas, Barbara Lewandowski

Ames Laboratory: Dan Kayser

Argonne National Laboratory: Nancy Cantwell, John Daum, Chris Dyszczakowski, Paula Mann, Andy Mosele

Oak Ridge Institute for Science and Education: Owen, Cox, Karen Eble, Ernest Whitaker

Oak Ridge National Laboratory: Cecilia, Connie

Pacific Northwest National Laboratory: Sandra Cannon, Wayne Larson

Thomas Jefferson National Accelerator Facility: Dennis Dobbins,

NATIONAL NUCLEAR SECURITY ADMINISTRATION HEADQUARTERS

Kansas City Plant: Carolyn Lucas

Los Alamos National Laboratory: Sonja Salzman,

Naval Reactors - Pittsburgh: Toni Denapoli, Ron Sand, Greg Sawl

Pantex: Bill Allen, Julie Chavarria, Boyd Deaver, David Koontz, Don Maxie, Allen Price,

Sandia National Laboratory: Morgan Gerard, Sam McCord

Y-12 Site Office: Jan Gilbert Jackson

Y-12 National Security Complex: Richard Martin, Anne Ostergaard

OTHER

Other: Tricia Judge (International Imaging Technology Council), Goldsmith, Dave Mueller

MINUTES

Welcome - Don Lentzen (DOE-HQ Environmentally Preferable Purchasing Lead)

Debut of Environmentally Preferable Purchasing Website – DOE Sites with Sandra Cannon, Moderator (Pacific Northwest National Lab)

Link to <http://www.eh.doe.gov/P2/epp/>

A brand new EPP website has been developed. The left-hand column is used for navigation and is consistent throughout the web site. This navigation menu is available on all individual web pages of the web site. The following 10 categories are available in the navigation menu:

- About EPP
- Drivers and Guidelines
- Designated products
- Lifecycle analysis
- Purchasing approach
- Outreach tools/transition to EPP products
- Teleconferences
- Awards/ Success Stories/ Technology Transfer
- Tracking and reporting
- Resources

Follow up to this debut is the Office of the Federal Environmental Executive send other Federal agencies the URL and suggested they take a look.

Walk Through EPP Reporting Website – Don Lentzen and Brett Goldsmith (DOE-HQ Information Technology)

Link to <http://www.eh.doe.gov/p2/dataentry.html>

- All questions related to the EPP Reporting website should be directed to Brett Goldsmith at brett.goldsmith@eh.doe.gov or by calling 1-800-473-4375.
- A user manual is available on the website and should answer most questions.
- Please update all point-of-contact information in the reporting database.
- A blank report option is provided to allow users to fill in the report off-line.
- Please designate only one person to upload the information to the database.
- Please submit any suggestions for improvements for next years database to Brett.

Walk Through Award Nomination Website – Don Lentzen

Link to <http://www.eh.doe.gov/p2/p2awards/>

The DOE Pollution Prevention Best in Class Awards recognizes innovative and/or exemplary pollution prevention, recycling, and environmentally preferable procurement projects and practices completed or performed in Fiscal Year 2005. Program Secretarial Office Best in Class, DOE P2 Star, and White House Closing the Circle awards will be granted in the following categories:

- Green Purchasing
- Waste/Pollution Prevention
- Recycling
- Environmental Management Systems
- Sustainable Design/Green Buildings
- Fuel Efficiency in Transportation

The nomination due date is December 7, 2005. Please note only one nomination is necessary to enter both the White House Closing the Circle and the Secretarial Office/DOE awards. The DOE winners will be announced on Earth Day 2006.

DOE Program Secretarial Offices select the Best in Class Award recipients from nominations submitted by sites. More than one candidate per category may be selected. The Best in Class Award selections are the source for submissions to the DOE P2 Star Awards and subsequently the White House Closing the Circle Awards. The Closing the Circle Awards recognize Federal facilities and employees for innovative practices and programs that have improved environmental performance and conditions at Federal facilities. The P2 Star Awards recognize excellence in pollution prevention and environmental sustainability stewardship efforts within the Department and are selected from the Best in Class Awards by an independent panel.

**Comments from Dana Arnold (Office of the Federal Environmental Executive)
regarding Closing the Circle nominations:**

- CTC nomination site should be open the week of October 31. DOE sites should submit through the DOE Headquarters system. DOE Headquarters is the only one to submit DOE site nominations to the CTC website.
- Process is the same as last year's and consists of two rounds of judging.
- Categories are the same as last year EXCEPT the Closing the Circle Green Purchasing awards will only be given to facilities nominating their biobased product initiatives—ones that are new and different. If a facility has already won a CTC award for their biobased product program, they will not be considered for the FY2005 award.
- Please submit more nominations for alternative fuel projects
- The first round of judging is by your own Federal agency to determine which nominations will be submitted for the CTC award. The second round is by other Federal agencies, and the final round of judging is by outside judges who are experts in the field.

Other comments from OFEE that are not related to the awards process:

- Energy Star is now a statutory requirement.
- United Soybean Board has provided a best practices report at <http://www.soybiobased.org/resources/BPG.pdf>
- USDA definition of biobased defines products as made from domestic material, which might violate federal trade requirements. This issue is currently being evaluated.

Biobased Absorbent – Sonja Salzman (Los Alamos National Lab)

An oil sponge product has been used throughout the last 3 years at LANL. Each sponge contains oil-eating bacteria and is placed in a special bin to allow for digestion after each use. Through the use of these sponges, vermiculite usage has decreased by 96% because the sponges work better than vermiculite.

LANL finds the sponge reduces 1000 kilograms of New Mexico "Special Waste" material annually with a cost avoidance of \$15K.

Question (Paul Wetherstein) – How does the product perform in the presence of other chemicals besides oil, such as antifreeze?

Answer – No problems have been reported.

Additional Information on the LANL Use of Biobased Absorbent - Made by Phase III and offered on line at Absorbentsonline.com

Phase III, Inc. has two oil sponges: one for general purpose made of "cotton lintners and pecan pith" and one remedial made of cotton lintners, pecan pith, nutrients, and microbial cultures. LANL is using the one with the microbial cultures.

More information on the LANL experience with biobased absorbent and a description of the container LANL designed to make the oil sponges reusable at a great cost savings is posted as a DOE success story at <http://www.eh.doe.gov/p2/epp/success.html>.

Cost Information Gathered by Jan Gilbert Jackson (Y12 National Security Complex) - COST COMPARISON:

ABSORBENT COST to absorb 1 gallon of 10W30 motor oil:

1.6 lbs of Oil Sponge GP/gal oil @ \$.45/lb = \$0.72/gal oil or
\$36 per 50 gallons of oil

1.6 lbs of Oil Sponge Remedial /gal oil @ \$.61/lb = \$0.98/gal oil or
\$49 per 50 gallons of oil

13 lb of Clay /gal oil @ \$.15/lb = \$2.05/gal oil
or \$125 per 50 gallons of oil

ABSORBENT COST SAVINGS: \$125 - (36 or 49) = \$76 to \$89 per 50 gallons of oil cleaned up

DISPOSAL COST of absorbent only: (assuming clean up of 50 gallons of motor oil spills, and oily absorbents are landfilled at a disposal cost of \$.05/lb)

1.6 lb Oil Sponge/gallon x 50 gallons x \$.05/lb = \$4

13 lb Clay/gallon x 50 gallons x \$.05/lb = \$32

DISPOAL COST SAVINGS: \$32 - 4 = \$28 per 50 gallons of oil cleaned up

TOTAL SAVINGS per 50 gallons of motor oil cleaned up:

Oil Sponge Absorbent Cost + Disposal Cost = \$40 to \$53 to clean up 50 gallons of motor oil

Clay Absorbent Cost + Disposal Cost = \$157 to clean up 50 gallons of motor oil

TOTAL SAVINGS = \$104 TO \$117 per 50 gallons of motor oil cleaned up or a savings of 66% to 75%

(Additional savings will be realized in reduced handling, storage, operator fatigue and reduced quantity of absorbent bags to be disposed.)

INFO SOURCES:

- www.phaseiii.com/absorbent.html
- www.phaseiii.com/oil_sponge_remedial.html
- http://oilsponge.com/products/oil_sponge.html

Recycled Transparencies/Viewgraphs – Dennis Dobbins (Thomas Jefferson National Accelerator Facility)

Plastic presentation folders and transparencies are high cost item which can be a major factor in non-compliance. 16% of such folders are purchased as recycled items at

Thomas Jefferson Labs. Cost is a major deterrent to purchasing recycled presentation folders.

Comment (Dana Arnold) – Transparencies are not intended to be part of the designated items and do not need to be reported.

Follow up (Sue Nogas, U.S. Environmental Protection Agency) - The designated products in the plastic binder/folder category are solid plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, and plastic presentation folders. No mention of document protectors is found in the background documents for this suite of products.

Follow up Comment (Sandra Cannon) - Sites should take credit for any non-designated products they purchase with recycled content or other environmental attributes by reporting them in the "Miscellaneous" section ("general miscellaneous" not the "miscellaneous designated product" section) of the DOE EO13101 report.

Although not designated, recycled content transparencies are made by 3M. Also an example of sheet protectors available with recycled content are those purchased at the Pacific Northwest National Lab from Corporate Express/Pacific Supply & Safety, AVE75537, 100/box, \$12.45/box, heavy duty.

Hewlett Packard Life Cycle Analysis of Remanufactured vs HP Virgin Material Cartridges – Tricia Judge (International Imaging Technology Council)

- Remanufactured printer cartridges offer a price savings over brand new cartridges.
- HP issued a life cycle analysis, comparing remanufactured and virgin material cartridges and stated there is no significant advantage in using remanufactured cartridges. However, HP's report had numerous **flawed assumptions**, such as the faulty assumption that HP receives all of their cartridges returned to them, the faulty assumption that no remanufacturer reuses a cartridge more than once, the faulty assumption that no remanufacturer has an end of life recycling program, and the faulty assumption that remanufactured cartridges do not perform as well as virgin cartridges.
- The Texas Department of Transportation have saved over \$3 million dollar with less than a 1% return rate for remanufactured cartridges—a return rate than is more than comparable to the virgin cartridge return rate.
- The International Imaging Technology Council has more information available on their website - <http://www.i-itc.org/>

Follow up News on the Topic - June 6, 2005 – U.S. Supreme Court refuses to hear case of Lexmark International Inc. against a North Carolina remanufactured printer cartridge component maker. The court rejected the company's request to examine an October 26, 2004 decision by the 6th U.S. Circuit Court of Appeals that overturned a preliminary injunction that banned Statis Control Components Inc. from selling its Smartek replacement chips for Lexmark toner cartridges. The Smartek chip bypasses the so-called "killer chip" that Lexmark puts in its T520/522 and T620/622 printers and corresponding toner cartridges, which acts as a lock out device (<http://www.wastenews.com/headlines2.html?id=1118068996>).

Biobased/Recycled Coolant

Don Lentzen - DOE recycled 171 metric tons of anti-freeze from a heating plant being dismantled in Miamisburg, Ohio.

Dana Arnold - As part of Energy Policy Act of 2005 requirements, OFEE reviewed reclaimed engine coolant purchasing by Federal facilities. One-third of the Federal fleet is leased from the General Service Administration fleet services and uses virgin long-life coolant in fleet vehicles. Because GSA fleet vehicles are turned in before the long-life coolant needs replacing, agencies generally are not purchasing replacement coolant for these vehicles. If coolant is needed, agencies follow the GSA fleet manager's instructions for obtaining service. There is little or no reclaimed long-life coolant available. Biobased coolants were not evaluated in this review because the law required a review of reclaimed engine coolant purchasing.

Sue Nogas – EPA researched the recycling of propylene glycol and found the Defense Logistics Agency was not carrying much of either virgin or recycled propylene glycol because the Department of Defense vehicles often operate in extreme climates for which ethylene glycol is better suited. There is not a lot of recycled propylene glycol available because there is not a big market for propylene glycol.

Sam McCord (Sandia National Lab) - In some cars, Sandia National Laboratories uses propylene glycol which is recycled by Safety Kleen. Sandia does not purchase recycled coolant.

Follow up News on the Topic – General Motors, Ford, and Chrysler have endorsed some recycled coolants that meet specific requirements. GM states that engine warranties will not be violated as long as engine coolant recycling is performed as described by the manufacturer and with GM-approved recycling equipment. Ford allows the use of specific antifreeze recycling processes and chemicals. For Chrysler, as long as the coolant meets Chrysler's and ASTM's specifications, it will not void the engine warranty. (See "performance" section of the following website:
http://www.swmcb.org/eppg/7_2.asp)

General Motor's warranty requirement is for Dex coolant (orange - ethylene glycol). Recycling Fluid Technologies in Battle Creek, Michigan is the only company Mal Hickok knows making reclaimed Dex coolant so there may be availability issues.

Follow up from Timonie Hood (U.S. Environmental Protection Agency) - Ethylene glycol and propylene glycol are chemically similar. Ethylene glycol has the chemical formula $C_2H_6O_2$. Propylene has the chemical formula $C_3H_8O_2$. Ethylene glycol has a slightly higher boiling point than propylene glycol. Ethylene glycol is less expensive to produce and is more widely used. Propylene glycol is less toxic.

Long Life Antifreeze - Organic Acid Technology (OAT). A new type of antifreeze, referred to as extended or long life, has emerged. Its unique chemistry differs significantly from that used in traditional antifreezes. Referred to as organic acid technology (OAT), this new chemistry uses organic acids to protect cooling system metals. Extended life antifreezes have been colored red or orange depending on the supplier; however, more colors may be used in the future. While these fluids do not deplete during service, they also do not protect as quickly as IAT coolants. These

differences require a significant change in procedures used to maintain the cooling system. General Motors® has been using this technology (DEX-COOL®) in their cars and trucks since 1996. They use an orange dye for DEX-COOL® product.

The industry is apparently shifting to longer-life coolants, like DexCool, that are also not available with recycled content (although they can be recycled back into shorter life coolants). In 1999, about 30 percent of new passenger vehicles and 5 percent of heavy duty equipment were factory filled with OAT coolants. DexCool comes standard in GM cars and truck since 1996 (making Federal purchases of GM vehicles by default in violation of RCRA 6002)

Additional background:

<http://www.epa.gov/epaoswer/non-hw/muncpl/antifree.htm>

<http://www.babcox.com/editorial/tr/tr110046.htm>

<http://www.eetcorp.com/antifreeze/antifreeze-faq.htm#q5>

Reduce Petroleum Use – Evaluate the potential for transitioning to biobased antifreeze where possible, such as a coolant in heating systems.

Next teleconference

- Date – January 26, 2006
- Other potential topics for the next teleconference. Please share your ideas. Some suggested so far are
 - Green Purchasing in Environmental Management Systems
 - Tracking systems
 - Electronic equipment
 - Life cycle comparisons of products with seeming conflicting environmental qualities, such as recycled and zero VOC paint, solid plastic recycled and chipboard clipboards

Adjourn

SEVEN NEWLY DESIGNATED RECYCLED PRODUCTS

Begin Purchasing and Collecting Purchasing Data by May 1, 2005

- Blasting Grit
- Furniture - Office
- Pipe – Non-Pressure
- Racks - Bicycle
- Ramps – Modular Threshold
- Roofing Materials
- Vehicle Parts – Rebuilt

Web Info: <http://www.epa.gov/epaoswer/non-hw/procure/products.htm>

SIX NEWLY PROPOSED BIOBASED PRODUCTS

Comments were to be submitted by September 6, 2005; final designation awaiting U.S. Department of Agriculture decision

- Lubricants, penetrating – 71% biobased content by weight
- Diesel fuel additives – 93%
- Urethane roof coating/sealant – 62%

- Hydraulic fluids for mobile equipment (tractors, etc.) – 24%
- Bedding, bed linens, towels (User Housing Facilities?) – 18%
- Water tank coating/sealant – 62%

Web Info: <http://www.regulations.gov/freddocs/05-12978.htm>

SOURCES OF INFORMATION

DOE's "Environmentally Preferable Products Program" website for access to the reporting site, annual report, teleconference agenda and minutes, and sources of helpful information

U.S. Department of Energy's RCRA 6002/Executive Order 13101 home page
<http://www.eh.doe.gov/p2/ap/default.htm>

Environmentally Preferable Purchasing Executive Orders, Regulations, Guidelines

Office of the Federal Environmental Executive
<http://ofee.gov/gp/gp.htm>

What Is Green Purchasing, Anyway?

Office of Personnel Management
www.golearn.gov (Free Catalog Section, then Legislatively Mandated...Topics)

GENERAL PRODUCT INFORMATION

Environmentally Preferable Products

U.S. Environmental Protection Agency
<http://www.epa.gov/oppt/epp/database.htm>

Alternative Fuels/Vehicles

U.S. Department of Energy
<http://www.eere.energy.gov/vehiclesandfuels/epact/federal/>

Biobased Products

U.S. Department of Agriculture
<http://www.biobased.oce.usda.gov/public/index.cfm>

Energy/Water Efficient Products

Federal Energy Management Program
<http://www.eere.energy.gov/femp/technologies/eeproducts.cfm>

Recycled Products and Suppliers

U.S. Environmental Protection Agency Comprehensive Procurement Guidelines
<http://www.epa.gov/epaoswer/non-hw/procure/index.htm>

Materials Exchange Products

(especially chemicals, equipment, and hazardous materials) at other DOE facilities
 Log on with user name (erhquser) and password (erhqdoe)
 DOE Complex Wide Materials Exchange
<http://wastenot.er.doe.gov/DOEmatex/index.html>

Substitutes for Ozone-Depleting Products

U.S. Environmental Protection Agency
<http://www.epa.gov/ozone/snap/lists/index.html>

SPECIFIC PRODUCT CATEGORIES

Carpet

Contract Language and Standards/Guidelines

U.S. Environmental Protection Agency
Select “carpet” at <http://yosemite.epa.gov/oppt/eppstand2.nsf/Pages/Search.html?Open>

Recycled Content Specifications and Suppliers

U.S. Environmental Protection Agency
<http://www.epa.gov/epaoswer/non-hw/procure/products/carpet.htm>

Suppliers

Green Seal “Choose Green Report: Carpet”
http://www.greenseal.org/cgrs/Carpet_CGR.pdf

Cement/Concrete

Recycled Content Specifications and Suppliers

U.S. Environmental Protection Agency
<http://www.epa.gov/epaoswer/non-hw/procure/products/cement.htm>

Cleaning Products

Contract Language and Standards/Guidelines

U.S. Environmental Protection Agency
Select “concrete” at
<http://yosemite.epa.gov/oppt/eppstand2.nsf/Pages/Search.html?Open>

Suppliers

Green Seal “Choose Green Report: Industrial and Institutional Cleaners”
http://www.greenseal.org/cgrs/CGR_I&I_cleaners.pdf

Construction Materials and Products

Contract Language

U.S. Department of Energy
<http://www.pnl.gov/doesustainabledesign/> , see “Letters of Intent, Construction Contracts”

Paint

Recycled Content Specifications and Suppliers

U.S. Environmental Protection Agency
<http://www.epa.gov/epaoswer/non-hw/procure/products/paint.htm>

Suppliers

Green Seal “Choose Green Report: Architectural Paints”
http://www.greenseal.org/cgrs/CGR_Paints.pdf

Toner Cartridges

Recycled Content Specifications and Suppliers

U.S. Environmental Protection Agency

<http://www.epa.gov/epaoswer/non-hw/procure/products/toner.htm>

DOWNLOAD AND RUN BEES 3.0 SOFTWARE

Register for software at <http://www.bfrl.nist.gov/oae/software/bees/registration.html> (no cost involved):

- Fill out registration form
- Click submit

To install BEES 3.0d:

- Download bees30dzip.exe, a 14.6 MB self-extracting file. (If prompted during the download, choose to save the file).
- From Windows Explorer, double click on bees30dzip.exe to start the self- extraction process.
- When prompted, choose a folder to unzip the file to and click Unzip.
- Using Windows Explorer, go to the folder you specified in Step 3, double click on Setup.exe and follow the directions on the screen. You will need to choose a folder in which to install BEES 3.0d. This folder must be different from the one you specified in Step 3.

To run BEES 3.0d:

- Select Start->Programs->BEES->BEES 3.0d

OR

- Go to "My Computer" or wherever you can see all folders and files on your computer. Do not try to open the BEES exe file from a software application, such as Word.
- Go to where you stored the BEES files (probably in a folder labeled "BEES")
- Open the BEES30d.exe file
- Go to "Analysis" at top of window
- Go to "Define Parameters"