



Department of Energy
Washington, DC 20585
March 11, 2003

Mr. John Howard
Office of the Federal Environmental Executive
1200 Pennsylvania Ave. NW, MS 1600S
Washington, DC 20460

Dear Mr. Howard:

The Department of Energy (DOE) is pleased to transmit the enclosed report in fulfillment of the annual reporting requirements under Executive Order 13101, *Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*. The report was prepared in accordance with the instruction provided in your letter to Agency Environmental Executives and Agency Senior Procurement Executives, dated November, 1, 2002, subject: FY 2002 Reporting on Implementation of the Resource Conservation and Recovery Act Section 6002.

The report contains the specific purchasing data that you requested on the eight (8) indicator items identified, and also a summary of DOE purchases of all fifty-four (54) Environmental Protection Agency designated products with recovered content. Additionally, the report provides DOE's performance on solid waste recycling, affirmative procurement contract compliance data from the Federal Procurement Data System, affirmative procurement program training and auditing, and other administrative details.

I have also sent a copy of this report to Ms. Angela Styles of the Office of Management and Budget under a separate cover. If you or your staff have questions or need more information, please contact Don Lentzen or Jane Powers of my staff at (202) 586-7428 and 7301, respectively.

Sincerely,

A handwritten signature in cursive script that reads "Beverly A. Cook".

Beverly A. Cook
Assistant Secretary
Environment, Safety and Health

Enclosure

cc: D. Arnold, OFEE



Department of Energy
Washington, DC 20585
March 11, 2003

Ms. Angela B. Styles
Office of Management and Budget
725 17th Street NW
Washington, DC 20503

Dear Ms. Styles:

The Department of Energy (DOE) is pleased to transmit the enclosed report in fulfillment of the annual reporting requirements under Executive Order 13101, *Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*. The report was prepared in accordance with the instruction provided in your letter to Agency Environmental Executives and Agency Senior Procurement Executives, dated November, 1, 2002, subject: FY 2002 Reporting on Implementation of the Resource Conservation and Recovery Act Section 6002.

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A handwritten signature in cursive script that reads "Beverly A. Cook".

Beverly A. Cook
Assistant Secretary
Environment, Safety and Health

Enclosure

cc: C. Vallina, OMB

**U.S. DEPARTMENT OF ENERGY
AFFIRMATIVE PROCUREMENT & RECYCLING
FISCAL YEAR 2002 REPORT**



pursuant to:

**Resource Conservation and Recovery Act
§6002 “Federal Procurement”**

and

**Executive Order 13101 “Greening the Government through
Waste Prevention, Recycling, and Federal Acquisition”**

March 2003

FORWARD

This report has been prepared in response to a November 1, 2002, memorandum from the Office of Management and Budget (OMB) and the Office of the Federal Environmental Executive (OFEE) to Federal Agency Environmental Executives and Agency Senior Procurement Officials. This memorandum transmitted a survey for reporting on agency purchases of recycled-content products pursuant to Resource Conservation and Recovery Act, Section 6002 and Executive Order 13101, *Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*.

Responsive to this OMB/OFEE memorandum, this report contains the following:

- an Executive Summary,
- a table summarizing the Department of Energy's (DOE) Fiscal Year 2002 purchases of Environmental Protection Agency-designated recycled content products,
- a completed survey on DOE purchases in Fiscal Year 2002, and
- attachments to the survey, providing supplemental information on impediments to purchasing products with recycled contents.

EXECUTIVE SUMMARY

- This report summarizes the Department of Energy (DOE) FY 2002 purchases of Environmental Protection Agency (EPA)-designated products that were obtained from non-Federal sources. DOE purchases from Federal sources of supply, such as the General Services Administration, Government Printing Office, and the Defense Logistics Agency are reported separately by those agencies.
- In FY 2002, DOE purchased products with recovered content (i.e., containing recycled material) in 49 of the 54 items on the EPA-designated products list. Table 1 summarizes DOE purchases of EPA-designated products with recovered content for FY 2002. The purchase data are summarized in two ways:
 - Purchases of EPA-designated items containing recycled materials are compared to total purchases of these items. This yields percentages that reflect the overall effect of DOE purchasing on the “recovered content” marketplace.
 - A comparison of purchase data adjusted for allowable exceptions authorized by Federal Acquisition Regulation 23.405(c), where EPA-designated recovered content items could not be purchased due to cost, performance, or availability. This yields percentages that reflect the overall performance of the Department’s Affirmative Procurement Program.
- DOE’s procurement requests specified the purchase of items on EPA’s designated products list 91% of the time. In a number of cases, virgin-content products were purchased instead due to product availability, cost viability, and product performance considerations. As a result, 73% of all DOE purchases of EPA-designated products contained recycled material (see Table 1).
- The Department’s purchasing power continues to play an important role in DOE’s commitment to environmental sustainability and waste prevention. In FY 2002, DOE purchases exceeded \$30 million for environmentally preferable products containing recycled material. Over the same period, the Department also recycled more than half (53%) of the solid wastes (non-radioactive/non-hazardous) generated at its production, analytical, and research and development activities across the country.

Table 1. FY 2002 DOE PURCHASES OF EPA-DESIGNATED PRODUCTS

Product	Total Purchases	w/ Recovered Content	% with		Adjusted Total	Adjusted % w/ Recovered Content
			Recovered Content	Adjusted Total		
Construction Materials						
Building Insulation Products	\$ 340,633	\$ 216,591	64%	\$ 253,337	85%	
Carpet	\$ 1,610,921	\$ 947,329	59%	\$ 1,172,349	81%	
Carpet Cushion	\$ 38,342	\$ 38,342	100%	\$ 38,342	100%	
Cement and Concrete	\$ 5,760,127	\$ 5,041,568	88%	\$ 5,050,039	100%	
Consolidated and Reprocessed Latex Paint	\$ 403,549	\$ 66,001	16%	\$ 83,173	79%	
Floor Tiles	\$ 63,516	\$ 30,105	47%	\$ 40,823	74%	
Flowable Fill	\$ 18,191	\$ 6,571	36%	\$ 6,571	100%	
Laminated Paperboard	\$ 16,900	\$ 4,900	29%	\$ 4,900	100%	
Patio Blocks	\$ 11,140	\$ 2,900	72%	\$ 2,900	100%	
Railroad Grade Crossing Surfaces	\$ 18,475	\$ 18,475	100%	\$ 18,475	100%	
Shower and Restroom Dividers	\$ 62,201	\$ 47,041	76%	\$ 50,946	92%	
Structural Fiberboard	\$ 6,194	\$ 3,394	55%	\$ 3,394	100%	
TOTAL - Construction Materials	\$ 8,350,189	\$ 6,423,217	77%	\$ 6,725,249	96%	
Landscape Products						
Compost	\$ 10,249	\$ 7,348	72%	\$ 7,348	100%	
Garden and Soaker Hoses	\$ 8,934	\$ 5,227	59%	\$ 5,227	100%	
Hydraulic Mulch	\$ 17,820	\$ 17,820	100%	\$ 17,820	100%	
Landscaping Timbers and Posts	\$0	\$0	NA	\$0	NA	
Lawn and Garden Edging	\$ 15,087	\$ 15,087	100%	\$ 15,087	100%	
TOTAL - Landscape Products	\$ 52,090	\$ 45,482	87%	\$ 45,482	100%	
Non-Paper Office Products						
Binders	\$ 1,154,294	\$ 372,359	32%	\$ 620,015	60%	
Office Recycling Containers	\$ 45,932	\$ 35,095	76%	\$ 36,172	97%	
Office Waste Receptacles	\$ 75,406	\$ 45,620	60%	\$ 55,482	82%	
Plastic Clip Portfolios	\$ 6,201	\$ 5,735	92%	\$ 6,179	93%	
Plastic Clipboards	\$ 1,849	\$ 1,094	59%	\$ 1,486	74%	
Plastic Desktop Accessories	\$ 146,079	\$ 58,282	40%	\$ 94,614	62%	
Plastic Envelopes	\$ 14,748	\$ 13,100	89%	\$ 13,426	98%	
Plastic File Folders	\$ 60,109	\$ 49,612	83%	\$ 53,240	93%	
Plastic Presentation Folders	\$ 75,425	\$ 33,831	45%	\$ 43,838	77%	
Plastic Trash Bags	\$ 964,120	\$ 748,747	78%	\$ 759,647	99%	
Printer Ribbons	\$ 38,061	\$ 3,806	10%	\$ 6,862	55%	
Solid Plastic Binders	\$ 35,466	\$ 5,611	16%	\$ 5,792	97%	
Toner Cartridges	\$ 5,653,918	\$ 3,333,762	59%	\$ 3,972,558	84%	
TOTAL - Non-Paper Office Products	\$ 8,271,608	\$ 4,706,654	57%	\$ 5,669,311	83%	
Paper and Paper Products						
Bristols	\$ 1,528,888	\$ 1,196,482	78%	\$ 1,417,559	84%	
Coated Printing Papers	\$ 397,105	\$ 95,652	24%	\$ 323,146	30%	
Commercial Industrial Sanitary Tissue Products	\$ 6,407,934	\$ 5,939,664	93%	\$ 6,184,949	96%	
Miscellaneous Paper Products	\$ 117,630	\$ 110,361	94%	\$ 110,361	100%	
Newsprint	\$ 25,282	\$ 682	3%	\$ 682	100%	
Paperboard & Packaging Products	\$ 591,945	\$ 545,677	92%	\$ 564,400	97%	
Uncoated Printing and Writing Papers	\$ 7,692,629	\$ 5,975,490	78%	\$ 6,362,263	94%	
TOTAL - Paper and Paper Products	\$ 16,761,413	\$ 13,864,008	83%	\$ 14,963,360	93%	

Table 1. FY 2002 DOE PURCHASES OF EPA-DESIGNATED PRODUCTS

Product	Total Purchases	w/ Recovered Content	% with Recovered Content	Adjusted Total	Adjusted % w/ Recovered Content
Park and Recreation Products					
Park Benches and Picnic Tables Containing Recovered Aluminum, Steel, Concrete, or Plastic	\$ 28,343	\$ 22,316	79%	\$ 22,316	100%
Plastic Fencing	\$ 85,562	\$ 37,946	44%	\$ 37,946	100%
Playground Equipment Containing Recovered Plastic, Steel, or Aluminum	\$0	\$0	NA	\$0	NA
Playground Surfaces	\$0	\$0	NA	\$0	NA
Running Track	\$0	\$0	NA	\$0	NA
TOTAL - Park and Recreation Products	\$ 113,905	\$ 60,262	53%	\$ 60,262	100%
Transportation Products					
Channelizers	\$ 134	\$0	0%	\$0	0%
Delineators	\$ 687	\$ 100	15%	\$ 100	100%
Flexible Delineators	\$ 30	\$0	0%	\$0	0%
Parking Stops	\$ 22,240	\$ 21,740	98%	\$ 21,740	100%
Traffic Barriers	\$ 70,726	\$ 70,226	99%	\$ 70,476	100%
Traffic Cones	\$ 24,207	\$ 22,377	92%	\$ 22,562	99%
TOTAL - Transportation Products	\$ 118,024	\$ 114,443	97%	\$ 114,878	100%
Vehicular Products					
Re-refined Lubricating Oil	\$ 328,714	\$ 163,160	50%	\$ 243,874	67%
Reclaimed Engine Coolant	\$ 33,553	\$ 18,943	56%	\$ 28,895	66%
Retread Tires	\$ 1,166,292	\$ 105,867	9%	\$ 262,497	40%
TOTAL - Vehicular Products	\$ 1,528,559	\$ 287,970	19%	\$ 535,266	54%
Miscellaneous Products					
Awards and Plaques	\$ 82,204	\$ 54,337	66%	\$ 55,893	97%
Industrial Drums	\$ 2,166,534	\$ 1,781,913	82%	\$ 1,825,584	98%
Manual-Grade Strapping	\$ 62,126	\$ 8,871	14%	\$ 61,348	14%
Mats	\$ 55,341	\$ 27,381	49%	\$ 33,064	83%
Pallets	\$ 119,401	\$ 20,959	18%	\$ 102,848	20%
Signage	\$ 525,347	\$ 351,750	67%	\$ 445,677	79%
Sorbents	\$ 104,700	\$ 32,567	31%	\$ 46,906	69%
TOTAL - Miscellaneous Products	\$ 3,115,653	\$ 2,277,778	73%	\$ 2,571,320	89%
GRAND TOTALS	\$ 38,311,441	\$ 27,779,814	73%	\$ 30,685,128	91%

NA=Not Applicable

Adjusted total equals total purchases minus the justified purchases of virgin-content items.

Adjusted percentage with recovered content = recovered content purchases divided by adjusted total.

Date Prepared: March, 2003

**RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) §6002
&
EXECUTIVE ORDER 13101 *GREENING THE GOVERNMENT THROUGH
WASTE PREVENTION, RECYCLING, AND FEDERAL ACQUISITION***

Agency Report for Fiscal Year 2002

Agency or Department: United States Department of Energy

Agency Contacts: Donald Lentzen/Jane Powers

Contact Telephone Number: (202) 586-7428/7301

Contact E-Mail Address: donald.lentzen@eh.doe.gov/jane.powers@eh.doe.gov

1. Federal Procurement Data System (FPDS) Data

- a) How many DD 350s or SF 279s did your Agency complete in FY 2002? **1,335**
- b) In FY 2002, how many DD 350s or SF 279s had a code in line B12F (for the DD 350) or block 19A (for the SF 279), which indicate whether EPA-designated items will be acquired? **1,335**
- c) Provide the number of DD 350s or SF 279s with each code, A-E, in line B12F (for the DD 350) or block 19A (for the SF 279). These codes indicate whether the EPA-designated products must contain the required minimum recycled content, the justification for not requiring recycled content products, or that no EPA-designated products will be acquired under the contract.
A (all EPA-designated products must contain the required minimum recycled content) **80**; B (availability) **5**; C (price) **0**; D (performance) **1**; E (no EPA-designated products acquired) **1,283**.
- d) How many DD 350s or SF 279s coded A, B, C, or D in block B12F (for the DD 350) or block 19A (for the SF 279) also had a code (A or B) in line B12G (for the DD 350) or block 19B (for the SF 279)? **85**
- e) Provide the number of DD 350s or SF 279s with line B12G (for the DD 350) or block 19B (for the SF 279) coded A or B. **A=73, B=12, No Entry=1,283 (due to entry of E on question 1.c above.)**
- f) How has the Agency reviewed the FY 2002 FPDS data for compliance assessment and/or trend analyses? **DOE assessed the data quarterly to determine whether there were 1) misunderstandings regarding the data elements, 2) short falls or gaps in compliance with the requirements of the Executive Order or 3) short falls in reporting. Generally, the data analysis indicates that DOE contracting activities and management contractors were in compliance but that there were instances in which further training was needed. Because the FPDS data are being collected for the first time this year they do not lend themselves to trend analysis. However, DOE performed trend analysis on data, other than FPDS data, collected over the**

past several years and it has helped track contractor compliance and target training needs.

- g) Please describe findings, changes, and/or actions that were a direct result of the assessments or analyses above. **DOE reviews identified instances where there was confusion concerning the data elements and this resulted in remedial training for the contract specialists. The first data call after the conclusion of the fiscal year included errors in identifying contracts with EPA-designated products. There were both over reporting and under reporting errors. Examples included reporting A (EPA-designated product involved) for a research contract without a deliverable product and reporting E (no EPA-designated product involved) when there actually was an EPA-designated product involved. The DOE Green Acquisition Advocates and Procurement Data Coordinators at each contracting activity have provided supplemental training to the Contract Specialists regarding the products and the contract clauses and will continue to monitor the FPDS reporting. In addition, the Department holds quarterly EO13101 teleconferences for its Recycling Coordinators and Green Acquisition Advocates. Discussion of this experience will be added to the agenda of the next teleconference.**

2. Indicator Items for EPA-Designated Recycled Content Products

The General Services Administration and the Defense Logistics Agency will provide data for agency purchases directly from them. Please provide amounts for your agency's purchases from other sources, including GSA schedule contractors and your service contractors, including construction contractors, fleet maintenance contractors, and facilities maintenance contractors.

- a) **Paper: Commercial Sanitary Tissue Products**
- i) Does your Agency purchase this item (directly or through contracts)? **Yes.**
If no, skip to next section.
 - ii) Total dollar amount¹ of these products purchased² by your Agency from sources *other than GSA* in FY 2002 **\$ 6,407,934 .**
 - iii) Dollar amount of these products containing recovered materials³ purchased by your Agency from sources *other than GSA* in FY 2002 **\$ 5,939,664 .**
 - iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes No Not Applicable

¹ "Total amount" equals the amount of product without recovered materials plus the amount of product with recovered materials.

² Within this document, the term purchased includes both direct government purchases, as well as procurement of products through government contracts.

³ The products designated by EPA are commonly referred to as "CPG-items" or "recycled content products." RCRA refers to them as "products containing recovered materials," which is the term used in this reporting document unless a more specific term, such as re-refined oil or retread tires, is used.

- v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **Yes** . If yes, please describe the impediment(s). - **Please see Attachment A**

b) Non-Paper Office Products: Toner Cartridges

- i) Does your Agency purchase this item (directly or through contracts)? **Yes**. If no, skip to next section.
- ii) Total dollar amount of these products purchased by your Agency from sources *other than GSA or DLA* in FY 2002 **\$ 5,653,918** .
- iii) Dollar amount of these products containing recovered materials purchased by your Agency from sources *other than GSA or DLA* in FY 2002 **\$ 3,333,762** .
- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes **No** **Not Applicable** **X**
- v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **Yes**. If yes, please describe the impediment(s). - **Please see Attachment B**

c) Construction Products: Concrete

- i) Does your Agency purchase concrete (directly or through contracts, e.g., construction contracts)? **Yes**. If no, skip to next section.
- ii) Total amount of concrete purchased and/or used by your Agency in FY 2002 **\$ 5,760,127** .
- iii) Amount of concrete containing coal fly ash and/or ground granulated blast furnace slag purchased and/or used by your Agency in FY 2002 **\$ 5,041,568** .
- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes **No** **Not Applicable** **X**
- v) Were there technical impediments to increasing the amount of concrete containing coal fly ash and/or ground granulated blast furnace slag purchased by your Agency in FY 2002?
Yes If yes, please describe the impediment(s). - **Please see Attachment C**

Note: Amounts include both Cement and Concrete

d) Landscaping Products: Landscaping Timbers

- i) Does your Agency purchase this item (directly or through contracts or other mechanisms)? **No**. If no, skip to next section.
- ii) Total dollar amount of these products purchased by your Agency in FY 2002 **\$ 0** .
- iii) Dollar amount of these products containing recovered materials purchased by your Agency in FY 2002 **\$ 0** .

- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes ___ **No** ___ **Not Applicable** **X**

e) Park and Recreation Products: Park Benches and Picnic Tables

- i) Does your Agency purchase this item (directly or through contracts or other mechanisms)? **Yes.**
- ii) Total dollar amount of these products purchased by your Agency in FY 2002 **\$ 28,343**.
- iii) Dollar amount of these products containing recovered materials purchased by your Agency in FY 2002 **\$ 22,316**.
- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes ___ **No** ___ **Not Applicable** **X**
- v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **Yes - Please see Attachment D**

f) Transportation Products: Traffic Barricades

- i) Does your Agency purchase this item (directly or through contracts or other mechanisms)? **Yes.**
- ii) Total dollar amount of these products purchased by your Agency in FY 2002 **\$ 70,726**.
- iii) Dollar amount of these products containing recovered materials purchased by your Agency in FY 2002 **\$ 70,226**.
- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes ___ **No** ___ **Not Applicable** **X**
- v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **No.**

g) Vehicular Products: Re-refined Oil

- i) Does your Agency purchase this item (directly or through contracts or other mechanisms)? **Yes.**
- ii) Total dollar amount of these products purchased by your Agency in FY 2002 **\$ 328,714**.
- iii) Dollar amount of these products containing recovered materials purchased by your Agency in FY 2002 **\$ 163,160**.
- iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes ___ **No** ___ **Not Applicable** **X**
- v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **Yes. - Please see Attachment E**

- h) **Miscellaneous Products: Signage**
- i) Does your Agency purchase this item (directly or through contracts or other mechanisms)? **Yes.**
 - ii) Total dollar amount of these products purchased by your Agency in FY 2002 **\$ 525,347**.
 - iii) Dollar amount of these products containing recovered materials purchased by your Agency in FY 2002 **\$ 351,750**.
 - iv) If this product is purchased using an Agency specification, does that specification require the use of recovered materials?
Yes No Not Applicable X
 - v) Were there any technical impediments to increasing the purchase of this item by your Agency in FY 2002? **Yes. - Please see Attachment F**

3. Solid Waste Prevention, Recycling, and Waste Minimization

- a) Did you institute new, substantially improved, or updated solid waste prevention practices in FY 2002? **Yes - Please see Attachment G**
- b) Does your Agency have sites or facilities with composting programs?
Yes. If yes, how many facilities or sites? **3**
Estimate the total weight of materials diverted to composting: Not Available.
- c) What percentage of offices/sites operated by your Agency have an active office products recycling program? **112 of 141 offices/sites, which is 79 percent of offices/sites.**
- d) What percentage of residential housing operated by your Agency have an active household products recycling program?
425 of 425 sites, which is 100 percent of housing.
- e) What percentage of demolition projects managed by and/or contracted by your Agency include the recovery of construction materials?
181 of 335 projects, which is 54 percent of demolition projects.
- f) What percentage of the total solid waste⁴ generated by your Agency was diverted to recycling? **151,523 of 284,829 metric tons, which is 53 percent.**
- g) Does your Agency have an internal awards program in accordance with Executive Order 13101, Section 802? **Yes.** Please provide details for your response, or if the response is no, please explain why not. **The Department of Energy Pollution Prevention Awards Program which is timed to precede the White House Closing the Circle Awards Program. The DOE Pollution Prevention Award competition is addressed in the Department's annual EO 13148 Progress Report.**
- h) In FY 2002, did your Agency participate in a pilot project to purchase environmentally preferable products or services per the requirements of E.O. 13101, sections 503(b) and 601(c)? **Yes - Please see Attachment H**

⁴ "Solid waste" refers to municipal solid waste as defined by EPA. Please indicate if your Agency is including other materials, such as construction and demolition debris.

4. Management Controls

a) **Affirmative Procurement Policy**

- i) Does your Agency have a documented policy or procedure for the implementation of the affirmative procurement program (APP) required by section 6002 of RCRA? **Yes No**
- ii) Does the Agency policy define responsibility for:
 - (1) Conducting awareness training? **Yes No**
 - (2) Incorporating APP requirements into specifications and contracts? **Yes No**
 - (3) Establishing and measuring progress toward APP objectives? **Yes No**
 - (4) Reporting progress? **Yes No**
 - (5) Management review? **Yes No**
- iii) Does your Agency have a requirement to routinely update the affirmative procurement policy? **Yes No** If so, is the APP policy reviewed/updated in accordance with this plan? **Yes No** Has the Agency affirmative procurement policy been updated within the past three years? **Yes No**
- iv) Please attach a copy of or provide the URL for the website for your Agency APP policy. <http://tis.eh.doe.gov/p2/ap/default.htm>

b) **Training**

- i) Who is responsible for conducting training of agency personnel with respect to the buy-recycled requirements? **Pursuant to DOE Order 450.1 “Environmental Protection Program,” the Office of Management, Budget and Evaluation, in coordination with other DOE elements (e.g., the Office of Environment, Safety and Health), is responsible for including training on environmental requirements and EMS in training programs for program manager, contracting personnel, procurement and acquisition personnel and facility managers, and for ensuring procurement policies and procedures encourage the Department’s acquisition of recycled-content materials.**
- ii) How many acquisition personnel have documented APP training within the past three years? **Green Acquisition Training has been presented in person or by teleconference seminar at every DOE contracting activity or management contractor operated site. The presentations have been to procurement, logistics, and engineering staff.**
- iii) Is training provided by agency personnel, an outside source (e.g., Defense Acquisition University’s contracting officer training courses), or both? **Both. Federal personnel have presented Green Acquisition training at both Federal and contractor-operated facilities. A Pacific Northwest National Laboratory representative has provided additional training to several other management contractor sites. In addition, Acquisition Career Development Certifications requirements for**

DOE's contracting employees include a module on Green Purchasing.

What percentage of purchase cardholders have documented APP training within the past three years, as required by Executive Order 13101?

Cardholders and approving officials are required to take an Affirmative Procurement Training for Purchase Cardholders and Approving Officials training module. Discussions with local Purchase Card Coordinators reveal that virtually all cardholders and approving officials have course completion certificates on file.

- iv) Who provides the training to purchase cardholders? **The Office of Procurement and Assistance Management, in coordination with the Office of Environment, Safety and Health, prepared the aforementioned self- instruction module. This computer based training course is available on the Office of Environment, Safety and Health Home Page at <http://tis.eh.doe.gov/p2/ap/default.htm>**
- v) How is training of purchase card users documented? **A Certificate of Completion is issued to the cardholders and approving officials after their completion of the computer based self instruction module. a copy is furnished to the local purchase card coordinator.**

c) **Auditing**

- i) What percentage of Agency facilities conducted and documented contracting and/or environmental audits⁵ for APP compliance during this reporting period? **GAO conducted an audit of the DOE Affirmative Procurement Program in 2001 and issued Report GAO-01-430. DOE procurement staff are provided with a Greening the Government Contracting Checklist along with the APP Acquisition Letter 2002-05. Additionally, DOE sites are implementing EMSs pursuant to EO 13148, and DOE Order 450.1 specifies that pollution prevention including the APP be integrated into the EMS self-assessments and annual reviews.**
- ii) Does the Agency conduct trend analysis of audit, training, and FPDS data to assess APP program effectiveness? **Yes No This is the first year that FPDS data has been collected so there is no trend data available.**
- iii) What types of trends are realized as a result of findings from these audits? **DOE has tracked trends through its annual reports for the last five years. The trends vary by contracting activity but generally reveal greater success in areas such as paper products. The trend analysis allows us to focus on areas that are not as successful.**
- iv) Are audit findings reported to senior facility management? **Yes No**
- v) Are corrective actions from these audit findings tracked by senior facility management? **Yes No**
- vi) Provide a copy of or the URL for the website for your Agency APP program **<http://tis.eh.doe.gov/p2/ap/default.htm>**

⁵ Includes internal, corporate, external, or other audits

d) **Agency Goals**

- i) As required by E.O. 13101, what is your agency's goal for solid waste diversion by 2005? 45% By 2010? 50%
- ii) What is your agency's current recycling or diversion rate? 53%
- iii) What is your agency's goal to increase the procurement of EPA-designated recycled content products? 100%
- iv) As required by E.O. 13101, does your agency have a goal for increasing the use of environmentally preferable products? No ___ Yes X If yes, what is the goal? 100% How are you measuring progress toward the goal? total purchases with recovered content divided by total purchases less justified exceptions = adjusted accomplishment. The adjusted accomplishment for FY 2002 is 91%.

Attachment A

Technical Impediments for Increasing the Purchase of Commercial Sanitary Tissue Products

Hanford Environmental Health Foundation

Facial tissue was not readily available from commercial stores, a significant cost difference for the preferred tissue, and did not meet the end user requirements for softness.

Lawrence Berkeley National Laboratory

Special lint-free wipes are required for scientific experiments to avoid contamination.

Pacific Northwest National Laboratory

Finding recycled wipes which would not leave lint has been a problem, and there have been some cost issues with certain vendors.

Sandia National Laboratory-California

Contracted office supply company does not offer non-abrasive and lint free wipes that contain recycled materials.

Attachment B

Technical Impediments for Increasing the Purchase of Toner Cartridges with Recovered Materials

Atlanta Regional Office

The office uses an older model color printer and cannot locate remanufactured toner cartridges.

Bettis Atomic Power Laboratory

Recycled toner cartridges were not available in every instance from our Bettis-Pittsburgh or Bettis-Idaho Office Products Suppliers. Recycled toner cartridges are not available for a limited number of newer black and white laser printers and were unavailable for most color printers. The depleted cartridges for all printers and reproduction machines are shipped for future refurbishment and recycling. We will continue to check with our Office Product Suppliers and the marketplace and will purchase these toner cartridges recycled when they become available.

Boston Regional Office

Remanufactured toner is not available at this time for an office color copy machine.

Hanford Environmental Health Foundation

Purchased new model HP Printers. Remanufactured cartridges were not available to refill yet.

Idaho National Environmental and Engineering Laboratory (INEEL)

INEEL initiated recycling of inkjet cartridges. The supplier picks up empty inkjet cartridges from end users and then disposes of the cartridges. This practice reduces the waste streams from employees at the INEEL and cartridges are disposed of correctly. However, INEEL was unable to identify sources of supply for some printer models where the product performance and quality of remanufactured cartridges is equivalent to the original equipment manufacturer. This is primarily the case where new models have been introduced into the market.

Kansas City Plant

Use of recycled toner cartridges void manufacturer's warranty on some office printers.

Knolls Atomic Power Laboratory (KAPL)

Toner cartridges for LZK90 printers are only available from Texas Instruments and are not available with recycled content. Prior experience with other toner cartridges containing recycled content caused low quality copies with high-resolution gray scale images and early contamination of rollers causing streaking copies. Toner cartridges for new HP4100 series printers were not available with recycled content when printers were purchased. KAPL worked with American Laser (small business/HUB Zone supplier) to have contractor obtain chips to remanufacture C8061X cartridges.

Lawrence Berkley National Laboratory

Berkeley Lab's office supply system contractor now substitutes recycled toner cartridges for virgin cartridges, where possible. We purchase toner cartridges for many different brands of fax machines, photocopiers, and color laser printers that require unique cartridge casings--available only from the original manufacturer. We have many machines for which manufacturers do not produce re-manufactured toner cartridges. Additionally, all used Berkeley Lab cartridges are recycled.

Nevada Operations Office

None of the color printers have recycled cartridge capability due to the color substances in the cartridges.

Ohio Field Office

Some recycled toner cartridges that were purchased leaked; therefore, virgin cartridges were purchased from another vendor. Some procurement officials have not been able to locate recycled toner cartridges for some of the newer printers. Vendors advised some procurement officials that use of recycled toner cartridges would void the warranty of our printers. We are investigating further and have found that this is in violation of the Federal Trade Laws and Regulations, specifically the Magnuson-Moss Warranty Act and/or Sherman & Clayton Antitrust Acts. Some procurement offices bought from GSA Federal Supply Schedule Contractors and assumed the toner cartridges were recycled to later find out they were not.

Pacific Northwest National Laboratory

Remanufactured cartridges were not available for new printers. As new printers come on the market, it takes over a year before enough spent cartridges can be collected from which to remanufacture cartridges.

Pantex Plant

There are performance concerns when using recycled toner cartridges. They do not meet the performance requirements for quality and durability.

Richland-Fluor Hanford

Fluor Hanford has an Affirmative Procurement Program for Toner Cartridges. Its toner cartridge-recycling program is a good example of a closed loop-recycling program that has been very successful. Used toner cartridges are shipped to a recycle contractor who refurbishes them and sends them back to the office supply vendor who in turn, sells them back to Hanford customers. Nearly all laser printer cartridges are recycled in this way and this year, several types of inkjet cartridges were added to the contract. Total savings for Fiscal Year 2002 (FY 02) is \$103,940.25.

Sandia National Laboratory-California

The Sandia/California contracted office supply company has remanufactured cartridges available. Sandia staff and contractors are not choosing remanufactured toner cartridges when available. The P2 Coordinator will re-educate the site to reduce cultural resistance to the use of remanufactured toner cartridge.

Sandia National Laboratory-New Mexico

Sandia's current toner cartridge supplier does not have the capability to remanufacture color toner cartridges with the necessary performance requirements at a reasonable price. Sandia is working with the supplier to increase their capabilities and make these cartridges available. Other toner cartridges are new and are not yet available as remanufactured products.

Seattle Regional Office

No known source of remanufactured toner cartridges for one copier and fax machine. Purchase was from the machine manufacturer.

Strategic Petroleum Reserve Project Management Office

Some virgin cartridges were bought for recently purchased equipment. The equipment was so new that the remanufactured cartridges were not available in the beginning of FY 02. Some remanufactured cartridges failed in performance and were returned. The virgin alternative was purchased due to project-related time constraints.

Western Area Power Administration

Only manufacturer recommended toner cartridges be used for performance reasons. Also, RMC toner cartridges cannot be obtained at a reasonable price for some machines.

Yucca Mountain Project (YMP)

YMP has many new printers and copiers, some of which are color. No remanufactured cartridges are available for the color printers and copiers. Some new black toner cartridges were procured in place of remanufactured toner cartridges.

Attachment C

Technical Impediments for Increasing Procurement of Cement and Concrete Containing Recycled Materials

Bettis Atomic Power Laboratory

Concrete was purchased with no recycled additives because locally available (Idaho) slag, fly ash, etc., have elevated background radiation levels and could not be used in a radiological storage area.

Fluor Hanford

Engineering assessments have concluded that cement and concrete containing fly ash/blast furnace slag does not meet organization requirements due to slow setup and/or cure time during inclement (cold or hot) weather months.

Idaho National Environmental and Engineering Laboratory (INEEL)

The dollar amount for cement that was purchased without coal fly ash was for pre-mix bags of cement (also known as "Portland Cement"). Pre-mix bags are not sold with fly ash or recovered content material. Blast furnace slag was not procured because this type of concrete mix is not readily available in our region. INEEL also does not specify the use of concrete with blast furnace slag because it contains radioactive constituents and does not meet site performance expectations.

Knolls Atomic Power Laboratory

Concrete containing coal fly ash or blast furnace slag did not meet the performance specifications for tilt-up wall panels.

Sandia National Laboratory-California

Sandia/California purchases its cement in small quantities and by the bag. These small quantity items do not contain fly ash.

Strategic Petroleum Reserve (SPR) Project Management Office

Some SPR locations do not have a readily available source for bagged cement containing fly ash or blast furnace slag. The larger jobs that require trucked cement are purchased with fly ash-content when practicable relative to the job specifications.

Western Area Power Administration

Fly ash or blast furnace slag containing concrete cannot be obtained in some remote job site locations.

Yucca Mountain Project (YMP)

Several vendors produce cement used by the YMP locally. There are no industrial processes that generate fly ash or blast furnace slag locally, thus cement meeting EO 13101 is not available locally. To purchase cement containing recycled material would require importing the product at a greater cost.

Attachment D

Technical Impediments for Purchasing Park Benches and Picnic Tables Containing Recovered Materials

Lawrence Berkley National Laboratory

Specific styles and finishes of benches were required to match the surrounding structures' architectural attributes.

Strategic Petroleum Reserve (SPR) Project Management Office

All the picnic benches or tables were purchased with either recycled aluminum or plastic except for some "time-constraint" buys which were requested for a special event at the SPR site.

Attachment E

Technical Impediments for Increasing the Purchase of Re-Refined Oil

Bettis Atomic Power Laboratory (BAPL)

The oil purchased with required specific grades and viscosity weight were unavailable with re-refined content. In another instance, using re-refined oil would void the engine warranty on the heavy equipment. BAPL will continue to check the marketplace for re-refined oil that meets these specific requirements.

Brookhaven National Laboratory (BNL)

BNL's vehicle repair facility has had bad experiences and damage two years ago. BNL is now purchasing re-refined oils for FY 03 based on assurances from vendors that the products are substantially improved.

Energy Technology Engineering Center

The terrain of the site calls for unique types of equipment, which must use non-recovered oil.

Idaho National Environmental and Engineering Laboratory (INEEL)

INEEL Fleet Management purchases the majority of its vehicular lubricating oils through the Defense Supply Center Richmond (DSCR) closed-loop program. Virgin lubricating oils are procured for INEEL's liquid natural gas (LNG) buses and pickups. The manufacturers' warranty of LNG vehicles specifically precludes the use of re-refined lubricating oils. Other reasons virgin lubricating oil was used include: 1) better pricing was obtained from a local provider for bulk 5w-30w oil; 2) virgin lubricating oils are being used in non-vehicular applications such as emergency generators, incinerators, and for machine shop equipment.

Lawrence Berkley National Laboratory

Special Vactra, DTE, and 2-cycle motor oils were required for unique engine applications, and these were not available with recycled content.

Southwestern Power Administration

Vehicles are used off-road in rugged terrain, and re-refined oil presents performance issues under these conditions.

Strategic Petroleum Reserve (SPR) Project Management Office

Specifications and maintenance requirements for certain types of equipment require the use of virgin-grade oil/lubricants. When possible, the SPR has used the recycled/refined version in the maintenance of equipment. Certain grades are not available as refined.

Y-12 National Security Complex

The Y-12 Garage has tested 10w-30w grade re-refined oils and determined that the re-refined oils breakdown under extreme heat conditions. The majority of the fleet vehicles are not driven under normal driving conditions. Vehicles are driven an average 2-3 miles with excessive idle speed that causes the oil to heat up and break down. The garage has changed the purchase of oil

to only one type that is purchased in bulk (\$4.00/gallon) and used on all vehicles and equipment. The current oil is 15w-40w grade and is not readily available at the bulk cost in re-refined from the vendor. Used oil is currently bulked and sent to an off-site recycler and/or used in a heater that burns waste crankcase oil for heat in the garage facility. The AVID vendor was contacted in October 2002, and the requirements for Y-12 to use re-refined oils and lubricants were discussed. The vendor was also asked about the availability of 15w-40w grade re-refined oil. The vendor stated that 15w-40w grade is not readily available in bulk and to do so would cost a considerable amount - at least equivalent to more than the virgin. The vendor also stated that the 15w-40w grade re-refined oils also breaks down under extreme heat conditions and did not advise its use in vehicles not driven in normal driving conditions.

Attachment F

Technical Impediments for Increasing the Purchase of Signage with Recovered Materials

Bettis Atomic Power Laboratory

The signs purchased were special order to meet specific Bettis requirements. The manufacturer would not guarantee the printed end product if the signs were constructed with recycled content plastic material. In another instance, signs purchased with no recycled content were less expensive than the recycled content alternative. We will continue to check the marketplace for recycled content plastic signs that meet our specifications. Nonetheless, it was considered that the price advantage for buying these items with virgin materials warranted the decision.

Hanford Environmental Health Foundation

Supplier does not have access to stock/raw material with recycled content for small indoor wall signs and badge plates.

Idaho National Environmental and Engineering Laboratory

There are currently no local suppliers that manufacture signs with recovered material. The signs procured without recycled content were needed to complete a project on schedule. Procurement was able to obtain a sign from a local manufacturer that allowed for the project to be completed on time. Also, there were added costs for shipping a sign with recycled content.

Lawrence Berkley National Laboratory

Special signs are required for general safety, laboratory doors, street safety, and dangerous situations, often with reflective, self-adhesive materials. These are not always available with recycled content.

Attachment G

Updated Solid Waste Prevention Practices

Argonne National Laboratory-East (ANL-E)

The ANL-E P2 Program and the P2 Advisory Committee initiated and continued the task of performing preliminary waste assessments (PWAs) on the high volume/cost waste generators at the Laboratory. Below are some examples of PWA's that were initiated during FY 02:

- Building 46 Vehicle Maintenance
- Building 202 Silver Staining Process
- Erosion Control System for the Coal Storage Yard
- Characterization Project for the Alpha Gamma Hot Cell
- APS-XFD Optics Fabrication Laboratory
- Building 376 High Bay H Engine

During FY 02, the above PWA's resulted in waste reductions and savings of approximately \$109,000.

Surplus Office Supply Exchange (SOS-X) is a program developed to recycle and reuse surplus office supplies and furniture, and Argonne Equipment and Materials Exchange (AEM-X) is a similar program developed to recycle and reuse surplus equipment, supplies, and materials by promoting the AVAILABILITY or NEED of items via the Laboratory's e-mail system. SOS-X and AEM-X programs were instrumental in the reuse of over \$100,000 of equipment, supplies, and materials during FY 02.

Battery Recycling Pilot Program is established in approximately 10 buildings and will continue to expand to divert commonly used batteries from the waste stream.

Brookhaven National Laboratory

Recycled asphalt was used for repaving projects.

East Tennessee Technology Park

All Oak Ridge Operations (ORO) pollution prevention (P2) accomplishments are reported to DOE semi-annually. Select Bechtel Jacobs Company LLC P2 accomplishments involving solid waste prevention are highlighted in this section. In fiscal year FY 02, Bechtel Jacobs company and its subcontractors initiated new initiatives and performed actions to reduce and/or recycle waste from ORO's Environmental Management (EM) waste operations and environmental cleanup activities by 1852 metric tons as highlighted in the FY 02 Accomplishments for EM activities at ORO. FY 02 new P2 activities included segregation of waste during field activities and waste management operation; reuse of valuable equipment and materials, including transfer of items off site for reuse as necessary; and recycle of metals and other materials.

Fluor Hanford

1) Hazardous Inventory Reuse Project: The Hanford Site had accumulated an abundance of hazardous inventory items over the past 40 to 50 years that were no longer needed. There were a mixture of several types of fire extinguishers, gas cylinders, and other hazardous materials that needed to be disposed of. Fluor Hanford, Inc. worked with local vendors and other companies on-site to re-use and recycle the materials. The project represented a total cost savings of nearly \$1.58 million for removal of 83.82 metric tons of hazardous materials.

2) Hanford Recycling Programs: The recycling programs for non-hazardous materials are very successful. The largest categories recycled are scrap metal and paper products. Paper products consist of office paper, cardboard, mixed paper, bulk mail, and telephone books. Hanford purchases copy paper that contains 30% post-consumer recycled paper. Other materials recycled at Hanford include software, toner cartridges, plastic, glass, tin, and wood pallets.

3) Hanford School Gift Program: Executive Order 12999 requires that to the extent permitted by law, all agencies give highest preference to schools and nonprofit organizations, including community-based educational organizations, in the transfer, through gift or donation, of educationally useful Federal equipment and computers. Fluor Hanford, Inc. administers the School Gift Program for DOE-RL and during FY 02, 1,229 computer workstations valued at over \$2,287,500 were donated to schools and educational non-profit organizations.

4) Eyeglass and Hearing Aid Donation Program: Hanford employees have been donating eyeglasses and hearing aids to the Kennewick Lions Club for 8 years. Once collected, the eyeglasses are tested for prescription levels, repaired (if necessary) and provided to the needy in underdeveloped countries. Hearing aids are repaired and re-utilized throughout the United States. This past year Hanford employees donated 439 pairs of glasses, 98 brand new disposable contact lenses, 8 hearing aids, and 131 hearing aid batteries, estimated at over \$40,000. 1,775 eyeglasses have been donated during the past 6 years.

Kansas City Plant

Federal Manufacturing & Technologies continues its ongoing practice of recycling/reusing materials wherever cost effective and feasible. Two waste streams that were previously disposed of in the local sanitary waste landfill, high density polyethylene and glass bottles, are now being collected and sent to a recycling facility in St. Louis, Missouri. High BTU content foam is sent to a fuel blender. The fuel blender mixes our waste with other wastes and sends the blended stream to a cement kiln where it is used as fuel in their process.

Lawrence Berkley National Laboratory

Berkeley Lab is committed to responsible and compliant management of hazardous, radioactive, mixed and sanitary wastes. Proper management of wastes is the responsibility of all Berkeley Lab employees and line managers. To help Berkeley Lab meet its waste reduction goals and because it is sound environmental management, the Facilities Division maintains recycling bins at various locations throughout the Lab to collect recyclable items such as metals, wood and cardboard. Recycling these items minimizes the amount of sanitary wastes sent to local landfills.

Lawrence Livermore National Laboratory (LLNL)

LLNL's shipping and receiving operation continues to investigate film recycling. Completed revision of the master construction specification to reflect affirmative procurement. Expanded cardboard recycling program is to include additional facilities. Expanded beverage container recycling program is to include picnic and pool areas. The Lab provided P2 awareness at several events open to LLNL employees, their families and/or the local community (e.g. Science on Saturday event, LLNL Family Days, LBNL Earth Expo event, etc.)

Los Alamos National Laboratory

Various new initiatives started in FY 02: Job Control Waste Minimization at NMT-7, Glass cleaning ovens at C-SIC, various Cooling Tower project upgrades.

Oak Ridge National Laboratory

The Lab initiated dry cell battery recycling for all types of dry cell batteries, including alkaline, ni-cad, mercury, silver, zinc, and lithium.

Ohio Field Office

As closure sites, OH maintains a constantly evolving waste minimization on program under the Ohio Cost Savings Group. New initiatives in 2002, included: lead recycle; electronics recycle; advanced soil shipment technology; and, several smaller initiatives

Pacific Northwest National Laboratory (PNNL)

- 1) New recycling/scrap opportunities identified in demolition activities resulted in 678.2 metric tons of solid waste (concrete, asphalt, and scrap metal) being recycled.
- 2) PNNL segregated and recycled wood (pallets, wood scrap, and tree trimmings) as a new ongoing recycling stream. The wood is chipped at the Richland Landfill for reuse in sewage composting and mulch for city facilities, parks, and for free redistribution to the community. Between program institution in February and September 2002, 25.26 metric tons were diverted.
- 3) PNNL recycled over 16 metric tons of lead bricks to NASA.
- 4) PNNL sold over 15 metric tons of used non-radioactive graphite blocks to an industrial user via a negotiated sales contract to avoid disposal as sanitary waste. The graphite blocks, previously used in a neutron dosimeter calibration structure, were to be discarded after the structure was dismantled as part of a legacy facility clean-up project. The graphite was originally advertised on DOE's Materials Exchange website. No DOE complex users were identified through this effort, but staff from DOE's National Center of Excellence for Metals Recycle identified it as a potential source of graphite for an industrial user who had previously sought excess graphite supplies. The sale of the graphite for over \$14K allowed PNNL to recover the investment required to gain various approvals for the sale, and leaving \$10K in net proceeds to re-invest in additional pollution prevention/material reuse projects. In addition, the project allowed DOE to avoid over \$26K in life-cycle waste management costs.
- 5) Direct contact with schools and non-profit organizations offering office product donations through the Office Product Exchange resulted in a four-fold increase of product redistribution from 2.10 metric tons in FY 01 to 8.67 metric tons in FY 02.
- 6) PNNL's new business sensitive paper-shredding service, Columbia Industries, is recycling the paper after shredding, with over 5 metric tons recycled in the 4th quarter.
- 7) PNNL's Grounds Crew baled tumbleweeds for reuse in sand drift control and archery

backstops, resulting in a 4 metric ton solid waste avoidance.

8) All materials produced by remodel of Director's Suite were reused. Used carpet, window coverings, conference table, cabinetry, icemaker, stove, dishes, small appliances, food carts, and furniture were donated to charity. Baseboard, window coverings, doorframes, doors, motion sensors, conference table, icemaker, dishwasher, and furniture were reused in the project. Other was furniture reused elsewhere in laboratory. Recycled fabric upholstery used on chairs and sound soak. Old portals were cut down for use as baseboards. Non-toxic glue and Non-VOC paint was used, resulting in 3.5 metric tons of solid waste avoided.

9) New chemical distribution program, ChemAgain, was instituted in April with over 1 metric ton redistributed on the Hanford Site to date. Late in the year, DOE approved a pilot to redistribute chemicals to northwest colleges and universities through this program.

10) PNNL redistributed 1,700 unspent fluorescent tubes (resulting from installation of new fixtures) to local schools for reuse creating a 0.85 metric ton avoidance.

11) Evaporation of non-regulated aqueous waste reduced this stream by 0.598 metric tons.

12) PNNL began issuing a bi-monthly newsletter to all staff electronically. The projected result will be an annual reduction of 0.34 metric tons of waste and a cost avoidance of almost \$12K per year.

13) PNNL initiated recycling cell phones, eyeglasses, and hearing aids a few years ago but did not report it at the time. Obsolete cell phones collected for reuse in FY 02 diverted a 0.036 metric ton from the solid waste stream. Eyeglass recycling diverted a 0.009 metric ton, and hearing aids a 0.001 metric ton.

Pantex Plant

The Pantex Pollution Prevention Team is leading a Yellow Belt Team on Sanitary Waste Reduction for the plant to help meet the Secretary of Energy's waste reduction goals. We plan to implement practices and recommendations from this project in FY 03. We will also continue supporting our cardboard recycling program by placing more cardboard dumpsters around the plant.

Princeton Plasma Physics Laboratory (PPPL)

The Maintenance Recycling Coordinator and the ER/WM Pollution Prevention Coordinator are conducting detailed surveys of the MSW of separate areas of PPPL to see which areas can improve their MSW recycling rate.

Rocky Flats Environmental Technology Site

The site Property Management organization established a contract in March 2002 to sell pallets accumulated from past operations on site. Previously, pallets were disposed as sanitary waste. Projects set up trial recycling programs for polyethylene terephthalate (PET or #1 plastic) Gatorade bottles from D&D crew break rooms. Single serving Gatorade bottles could not currently be replaced with bulk dispensers for logistical reasons.

Sandia National Laboratory-California

A Return-on-Investment project was completed, requesting funding for a new wood chipper. The purchase of this equipment will allow trimmings to be chipped and spread throughout the site, rather than taken to the landfill. Funding was received for an oil analyzer for use in the Facilities Department. This equipment allows the Facilities Mechanic to change out oil in equipment only

when needed, rather than on a time schedule. A Pollution Prevention Opportunity Assessment (PPOA) has been completed identifying tasks for 3 more PPOA's to be completed for FY 03. Data was gathered and opportunities were identified. 12 Geiger Counters were transfer to the Homeland Security Office at Oak Ridge.

Sandia National Laboratory-New Mexico

Two solid waste prevention efforts were instituted in FY 02. 1) Sandia has improved its white paper recycling process by making it easier and more convenient. As a result, increased participation is expected which will ultimately result in solid waste prevention. Previously it was necessary to place white paper in a cardboard box, seal the box, and carry it to a wire cage located outside. Instead, large wheeled totes are now centrally located inside buildings to collect white paper. Smaller individual bins that are available in two sizes are used to collect the white paper in work areas. Each individual empties their personal bin into any conveniently located tote. Full totes are being replaced with empties on a weekly schedule and will be monitored to determine whether this schedule needs to be adjusted. 2) Prior to 2002, the reported Sandia routine sanitary waste number included waste that was being estimated based on the number of dumpsters serviced and their capacity, rather than according to the actual volume of the contents. Over a two-month period in 2002, these dumpsters were monitored prior to scheduled pick-ups and the utilization was recorded. The assessment was conducted during the highest use months to provide a peak measure of waste generation and the most conservative estimate for all other months. This new measurement was applied to the entire FY 02 routine sanitary waste. This preliminary assessment of the quantification of sanitary waste will enable more accurate measurements of future waste reductions.

Savannah River Site (SRS)

SRS completed 47 Pollution Prevention Projects in FY 02 (40 routine, 7 cleanup). In FY 02, these projects avoided 1,752.3 m³ of waste generation, resulting in a cost avoidance of \$19.3 million.

Strategic Petroleum Reserve (SPR) Project Management Office

The P2 Program was fully integrated with the Behavioral Safety program in FY 02. P2 activities are conducted that focus and encourage positive behaviors that reduce waste/prevent pollution. Cardboard balers were installed at 2 SPR locations, which resulted in recycling a total of 22,645 lbs of cardboard. Bryan Mound SPR replaced battery-powered with solar-powered lighting for barricades. The SPR fully implemented the recommendations of the SPR Paint Waste Minimization Team, which won the DOE award in the P2/WM category. A Laboratory Waste Minimization team evaluated the options to reduce HW resulting from laboratory activities and provided recommendation to be implemented in FY 03.

Thomas Jefferson National Accelerator Facility

Five additional full-service recycling centers were added at various site locations during FY 02. Also, six mini-service centers (limited product collection capability) were started. We now have a total of 17 recycling centers operated by 19 Lab volunteers. In addition, a site-wide electronic environmental newsletter, EarthWise, has been started to inform and promote sound Affirmative Procurement, waste minimization, and pollution prevention practices.

Western Area Power Administration

A process for the collection and recycling of waste batteries and lamps was put in place at all Sierra Nevada and Rocky Mountain Region facilities.

Y-12 National Security Complex

Select Y-12 P2 accomplishments involving solid waste prevention are highlighted in this section. **DRY ICE USED TO REMOVE ASBESTOS TILE.** Typically, the removal of asbestos-containing floor tile by carpenters at the Y-12 National Security Complex has been performed using manual methods which require the workers to be in full dress-out personal protective equipment (PPE) (i.e., respirators, paper suits, gloves, etc.) and involved a great deal of physical exertion using straight-hoes to dislodge the tiles. Heat stress was often a major consideration when removals were performed in summer months because of the dress-out requirements and the requirement to seal ventilation to the work area. Workers who had used the dry ice method at the Oak Ridge National Laboratory suggested that this method be used for the large demolition job at the Y-12 Complex. The Industrial Hygiene Department (IH) reviewed the job tasks and hazards and determined that the carpenters did not have to be fully dressed out and in respirators. The PPE was reduced to basic use of gloves, safety glasses, and long-sleeved coveralls. The possibility of heat stress was greatly reduced. IH supplied a technician for on-site oxygen level monitoring during the work. The dry ice method involves spreading the dry ice over the floor tile and allowing it to sit for a few minutes. These tiles separate from their adhesive bond with the sub-floor allowing the workers to easily remove the tiles. This eliminates the physical exertion required of the workers to dislodge the tiles using the traditional method. The tiles can simply be picked up by hand or scooped up by shovel. The ice was redistributed to other areas before it evaporated, providing additional cost savings. The time required to complete the tile removal was less than if traditional methods had been used.

STEAM PLANT RESIN REPLACEMENT PROJECT: The Y-12 Steam Plant replaced the resin used to soften the incoming potable water. The replacement resin is Dowex Marathon C (Na) Strong Acid Cation. It was determined that 69 cubic feet per tank was needed of the sodium form and 176 cubic feet per tank was needed of the hydrogen form of the resin. This activity significantly reduced the number of regenerations required by the Steam Plant.

48 X 44 SKIDS FOR DRUMS: The Y-12 National Security Complex has instituted a program where vendors are required to deliver containers (i.e., drums) on 48 inch by 44 inch (48 X 44) wooden pallets. The 48 X 44 pallets are required for preparation of waste being sent to Bechtel Jacobs Company, which is DOE's waste management contractor for the Y-12 Complex. An additional objective is to eliminate the need to dispose of waste pallets that are generated which are not 48 X 44. This reuse also eliminates the need for Y-12 to purchase 48 X 44 pallets to send the waste for processing.

Yucca Mountain Project (YMP)

In keeping with the YMP effort to continually improve upon existing practices, the P2 Program is undergoing continuous improvement. The primary aspects of the P2 Program having to do with solid waste prevention are Awareness, Recycling, and Integration with Property Management. Awareness of the P2 Program and recycling is being developed through the following: articles in YMP electronic newsletters, weekly newsletters that are posted in easy to read locations, including daily updates; presentations at a significant number of staff meetings; incorporation into the Zero Accident Philosophy program project-wide behavioral modification

initiative; presentation of P2 committee concerns and findings at the President's Zero Accident Council which is attended by senior management. Recycling of aluminum cans, paper, cardboard, and scrap metals was reviewed for Site Operations. Opportunities for increasing the recycling stream for each of these wastes were identified and will be implemented in 2003. Environmental Compliance issues are being incorporated into the Property Management Procedures. Weekly integration meetings are held with both DOE and Contractor Property Management and Waste Management personnel. A determined effort is underway to recycle or excess no longer needed or useable property, instead of sending it to the landfill.

Attachment H

Purchase of Environmentally Preferable Products and Services Pilot Projects

Argonne National Laboratory-East (ANL-E)

ANL-E has developed and implemented a Sustainable Design Implementation Plan that promotes environmentally preferable building materials and construction methods within facility design and construction projects. The program includes a Sustainable Design policy, a National Environmental Policy Act (NEPA) checklist, specification changes, procurement guidance, documentation, training, and guidance for design staff. By implementing the Plan, ANL-E diverts waste from the landfill; reduces facility energy use, resource consumption, and operating costs; improves indoor air quality; and stimulates the economy for sustainable products and services.

Fermi National Accelerator Laboratory

BWXTO, the Fermi operating contractor, continues to support EPA's "Waste Wise" program and has accomplished one of its goals of implementing a program for the use of recycled toner cartridges.

Pacific Northwest National Laboratory

The Pacific Northwest National Laboratory evaluated the south wing of a building (2 conference rooms, 2 restrooms, and a hallway) against environmental sustainability criteria, made improvements, and documented the results based on the Leadership in Energy and Environmental Design (LEEDTM) rating system. The Pacific Northwest National Laboratory also tested 10 environmentally preferable paints and found one that appears to meet both coverage, health, and recycled content criteria. The final testing and evaluation will be completed in FY 03.

Princeton Plasma Physics Laboratory

The Material Control Division and the Pollution Prevention Coordinator are purchasing remanufactured inkjet cartridges on a trial basis. This trial program started in the last quarter of FY 02.

Sandia National Laboratory-New Mexico

A major pollution prevention initiative in FY 02 by the Sandia Fleet Services Department was the expansion of Sandia's environmentally preferable modes of transportation. This initiative included the expansion of Sandia's selection of alternative fuels, purchasing Alternative Fuel Vehicles (AFV), optimization of vehicle usage, and assessing the use of personal transporters. This resulted in 74 percent of Sandia vehicles utilizing alternative fuels, a 94 percent request rate of AFV, the purchase of 39 Neighborhood Electric Vehicles (NEV), and the purchase of 1 SegwayTM. Each EPP purchase is described below. 1) Expansion of Alternative Fuel Selection: Sandia's alternative fuels station was expanded to include bio-diesel 20 percent blend (B20) and 85 percent ethanol and 15 percent gasoline (E85). To accomplish this Sandia's Fleet management worked diligently with fuel suppliers in neighboring states to make the two fuels available in New Mexico. 2) Purchase of Alternative Fueled Vehicles: Sandia's Fleet

management views alternative fuel vehicles as an environmentally preferable alternative to standard fleet vehicles and has taken a proactive approach to acquiring each year at least 75 percent of light duty vehicles as alternative fuel vehicles (AFV). In 2002, a total of 109 light duty vehicles were ordered from the General Service Administration (GSA) and 102 of the 109 light duty passenger vehicles were ordered as an AFV. This equates to a request rate of 94 percent. 3) Fleet Optimization: Sandia is continually trying to reduce the total number of vehicles in the fleet to optimize vehicle usage. In addition, Sandia is also interested in looking at options to reduce the size and impact of vehicles moving toward environmentally preferable smaller more efficient modes of transportation including NEVs, which are zero-emission vehicles. 4) Personal Transporters: In addition to the purchase of AFVs and NEVs in FY 02, Sandia has been investigating the feasibility of using personal transporters such as the Segway™. The Segway™ Human Transporter (HT) is the first of its kind—a zero emissions, self-balancing, personal transportation device that is designed to operate in any pedestrian environment. Sandia purchased one Segway™ in 2002 and is in the process of determining the feasibility of implementing usage site-wide by putting it to the test with our Building Management Department. To our knowledge Sandia is the first DOE facility in the complex to look at implementing use of a personal transporter and is the first in the state of New Mexico to own one.

Western Area Power Administration

A project was initiated at our Corporate Services Office (CSO) in Lakewood, Colorado to use 100% RMC copy and printer paper.

West Valley Demonstration Project

A Pollution Prevention Opportunity assessment was performed on citrus (bio-based) cleaners for janitorial purposes. The cleaners were found favorable and their use has been initiated in the janitorial program.