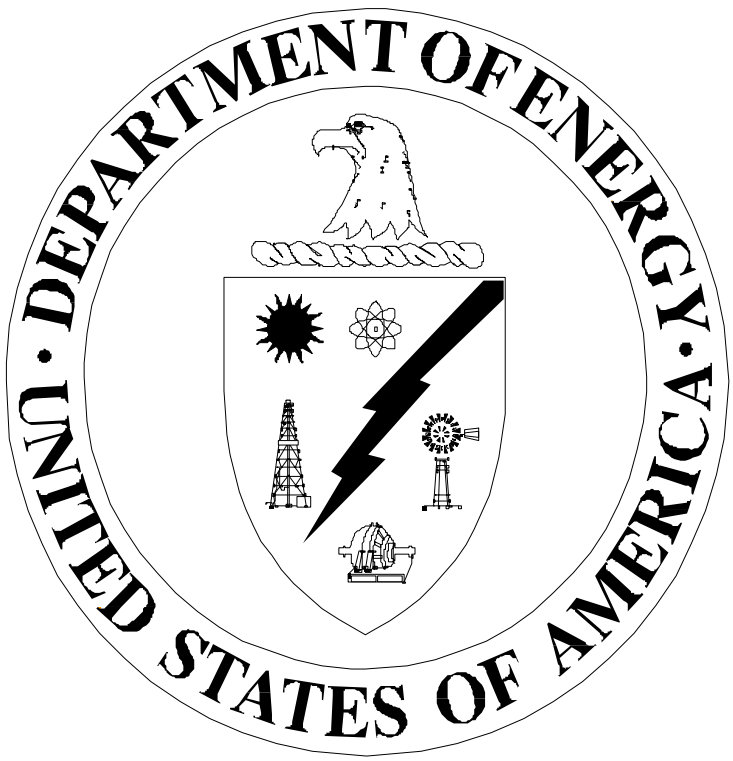
U.S. Department of Energy

Resource Conservation and Recovery Act (RCRA)/Executive Order 13101 AGENCY SUMMARY REPORT for Fiscal Year 2000



as required by:

RCRA Section 6002 and Executive Order 13101

"Greening the Government Through: Waste Prevention, Recycling, and Federal Acquisition"

February 21, 2001

EXECUTIVE SUMMARY

The Department of Energy (DOE) continued in Fiscal Year (FY) 2000 to promote the goals of the Resource Conservation and Recovery Act (RCRA) section 6002 and Executive Order 13101 (EO 13101).

The DOE requires its site operating contractors to follow RCRA section 6002 and EO 13101 requirements pertaining to waste prevention, recycling, and affirmative procurement. During FY 2000, DOE issued its *Strategic Plan to Implement Executive Order 13101*. The Plan established Department policy for achieving the requirements of EO 13101. It serves as the principal Secretarial guidance to all DOE staff and contractors to improve sanitary waste prevention, recycling, and the purchase and use of recycled content and environmentally preferable purchasing and services within DOE. DOE also proposed a revision to its acquisition regulations to streamline policies and procedures for the purchase of items containing recovered materials.

The data in the DOE RCRA/EO 13101 Agency Summary Report for FY 2000 reflect purchases of Environmental Protection Agency (EPA)-designated items that were obtained only through non-Federal sources. DOE's purchases from Federal sources of supply, such as the General Services Administration, Government Printing Office, and Defense Logistics Agency, are reported separately by those agencies. The totals of DOE purchases from these sources have been minor in the past when compared to the data reported here.

The purchase data are summarized in two ways (see the following table). First, purchases of EPA-designated items containing recovered 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 (where the items were cost prohibitive or where they did not meet performance or availability requirements) is also shown in the table.

In FY 2000, 66 percent of the Department's purchases contained recovered content. The Department's adjusted performance is 86 percent, based upon site justifications that the EPA-designated items were not purchased due to cost, performance, or availability requirements. These results reflect a modest improvement over FY 1999, when the percentage of recycled content items purchased was 60 percent and the adjusted performance was 85 percent. Also, in FY 2000, DOE recycled 108,000 metric tons of solid waste. This is equivalent to the average waste generated by 150,000 Americans for an entire year.

DOE has two additional accomplishments to report regarding its Affirmative Procurement Program. In May 2000, DOE's Senior Procurement Executive issued an Acquisition Letter, which establishes a policy of partnership between acquisition, program, and environmental staff in implementing the requirements of EO 13101. The letter requires the designation of Green Acquisition Advocates who serve as the acquisition experts on "Greening the Government" initiatives. DOE sites also implemented environmentally preferable purchasing in FY 2000. Examples of these purchases are found in Attachment A of this report.

FY 2000 DOE PURCHASES OF EPA-DESIGNATED PRODUCTS

Product	Total	w/ recovered content	% w/ recovered content	Adjusted Total	Adjst % w/ recovered content
Paper	**$ 14,384,505**	**$ 11,447,412**	**80%**	**$ 12,824,576**	**89%**
Uncoated Printing	$ 8,384,858	$ 6,187,700	74%	$ 7,193,904	86%
Commercial Sanitary	$ 3,541,956	$ 3,286,034	93%	$ 3,425,244	96%
Bristols	$ 1,363,557	$ 1,112,294	82%	$ 1,238,726	90%
Paperboard, Packaging	$ 710,775	$ 601,121	85%	$ 645,746	93%
Coated Printing	$ 263,251	$ 168,511	64%	$ 199,998	84%
Miscellaneous Paper Products	$ 6,262	$ 4,906	78%	$ 5,112	96%
Newsprint	$ 113,846	$ 86,846	76%	$ 115,846	75%
Construction	**$ 13,763,232**	**$ 9,166,171**	**67%**	**$ 9,415,283**	**97%**
Cement & Concrete	$ 11,751,343	$ 8,150,913	69%	$ 8,161,854	100%
Carpet	$ 914,918	$ 377,129	41%	$ 602,604	63%
Building Insulation	$ 582,396	$ 475,118	82%	$ 478,259	99%
Floor Tiles	$ 118,298	$ 59,693	50%	$ 59,693	100%
Structural Fiberboard	$ 76,237	$ 61,866	81%	$ 71,421	87%
Laminated Paperboard*	$ 3,976	$ 3,976	100%	$ 3,976	100%
Consolidated Latex Paint	$ 283,264	$ 9,676	3%	$ 9,676	100%
Shower and Restroom Dividers	$ 32,800	$ 27,800	85%	$ 27,800	100%
Non-Paper Office	**$ 7,668,411**	**$ 3,712,138**	**48%**	**$ 5,686,820**	**65%**
Toner Cartridges	$ 5,435,684	$ 2,628,089	48%	$ 4,256,610	62%
Plastic Trash Bags	$ 799,315	$ 640,414	80%	$ 648,930	99%
Plastic Desktop Accessories	$ 257,723	$ 126,072	49%	$ 189,645	66%
Binders	$ 1,007,097	$ 228,820	23%	$ 474,221	48%
Waste Receptacles	$ 25,375	$ 9,333	37%	$ 16,893	55%
Recycling Containers	$ 62,958	$ 56,879	90%	$ 61,970	92%
Plastic Envelopes	$ 20,712	$ 10,705	52%	$ 13,658	78%
Printer Ribbons	$ 59,547	$ 11,826	20%	$ 24,893	48%
Vehicular	**$ 1,644,572**	**$ 351,513**	**21%**	**$ 851,690**	**41%**
Tires	$ 920,557	$ 110,030	12%	$ 193,209	57%
Re-refined Oil	$ 705,895	$ 238,735	34%	$ 653,526	37%
Reclaimed Coolant	$ 18,120	$ 2,748	15%	$ 4,955	55%
Transportation	**$ 19,023**	**$ 16,977**	**89%**	**$ 17,564**	**97%**
Traffic Barriers**	NA	NA	NA	NA	NA
Traffic Cones	$ 8,815	$ 6,769	77%	$ 7,356	92%
Channelizers**	NA	NA	NA	NA	NA
Delineators	$ 10,208	$ 10,208	100%	$ 10,208	100%
Flexible Delineators**	NA	NA	NA	NA	NA
Parking Stops**	NA	NA	NA	NA	NA
Landscape	**$ 898**	**$ 898**	**100%**	**$ 898**	**100%**
Lawn and Garden Edging*	$ 646	$ 646	100%	$ 646	100%
Garden and Soaker Hoses*	$ 252	$ 252	100%	$ 252	100%
Park and Recreation	**$ 1,044**	**$ 1,044**	**100%**	**$ 1,044**	**100%**
Plastic Fencing*	$ 1,044	$ 1,044	100%	$ 1,044	100%
Miscellaneous	**$ 226,514**	**$ 40,681**	**18%**	**$ 50,845**	**80%**
Pallets	$ 226,514	$ 40,681	18%	$ 50,845	80%
Totals	**$ 37,708,199**	**$ 24,736,834**	**66%**	**$ 28,848,720**	**86%**

Adjusted Total is the dollar Total minus the justified-virgin-content items

Adjst % w/ recovered content = (Recovered-content purchases) divided by (Adjusted total)

* Incomplete data: only one site reporting. Reporting not required as DOE purchased less than $10,000 of the item in FY 1999.

** NA = Not Applicable. Reporting not required as DOE purchased less than $10,000 of the item in FY 1999.

Date Due: March 17, 2001

Date Prepared: February 21, 2001

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

Agency Report for Fiscal Year 2000

Agency or Department: Department of Energy

Agency Contact: Susan Weber
Environmental Management
Office of Technical Program Integration
Pollution Prevention Team (EM-22.3)

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I. EPA Guideline Items

A. Cement and Concrete Products containing fly ash and cement and concrete products containing granulated blast furnace slag (slag).

DOE does not track cement separately from concrete.

1. Total amount of cement purchased and/or used by your agency in FY 2000.
Without fly ash or slag **$**_____ and/or _____ cubic yards, and/or total number of contracts awarded _____
With fly ash or slag **$**_____ and/or_____ cubic yards, and/or total number of contracts awarded_____

2. Total amount of concrete purchased and/or used by your agency in FY 2000
Without fly ash or slag **$3,600,430** and/or _____ cubic yards, and/or total number of contracts awarded _____
With fly ash or slag **$8,150,913** and/or _____ cubic yards, and/or total number of contracts awarded_____

3. Were there technical impediments to increasing the amount of concrete and cement containing fly ash and granulated blast furnace slag purchased by your agency in FY 2000? (If yes, please attach an explanation of the technical impediment.) **Yes, see Attachment B.**

B. Paper and Paper Products. **GSA and GPO will provide data for agencies' purchases of paper products made through their retail and wholesale stock program. However, please provide amounts for agency purchases from any other sources.**

1. Total dollar amount of paper and paper products purchased by your agency from sources other than GSA and GPO in FY 2000 **$14,384,505**

2. Total dollar amount of paper and paper products containing recycled material purchased by your agency from sources other than GSA and GPO in FY 2000 **$11,447,412**

C. Motor Vehicle Lubricating Oils. **DLA will provide data for agencies' purchases of oil through their program. However, please provide amounts for agency purchases from other sources.**

1. Total amount of motor vehicle lubricating oil purchased by your agency in FY 2000 **$705,895** (If your vehicle maintenance is accomplished through service contracts that include a standard price for vehicle servicing, report the total number of servicing(s) rather than the dollar value.)

2. Total dollar amount of motor vehicle lubricating oils containing re-refined oil purchased by your agency in FY 2000 **$238,735** (If your vehicle maintenance is accomplished through service contracts that include a standard price for vehicle servicing, report the total number of services where the vehicle was serviced with re-refined oil rather than the dollar value.)

3. Were there any technical impediments to increasing the amount of motor vehicle lubricating oils containing re-refined oil purchased by your agency in FY 2000? (If yes, please attach an explanation of the technical impediment.) **Yes, see Attachment C.**

D. Retread Tires. Refer to the Federal Supply Schedule for Pneumatic Tires, FSC Group 26, Part II, Section A for items covered by this guideline.

TACOM will provide data for agencies' purchases of retreads for tactical vehicles.

1. Total dollar amount of tires purchased by your agency in FY 2000 **$920,557**

2. Total number of tires purchased by your agency in FY 2000 **8,820**

3. Total dollar amount of retread tires purchased by your agency in FY 2000 **$110,030**

4. Total number of retread tires purchased by your agency in FY 2000 **744**

5. Were there any technical impediments to increasing the amount of retread tires purchased by your agency in FY 2000? (If yes, please attach an explanation of the technical impediment.) **Yes, see Attachment D.**

E. Building Insulation Products.

1. Total dollar amount of building insulation products purchased by your agency in FY 2000 **$582,396 or total number of contracts awarded** _____

2. Total dollar value of building insulation products containing recycled materials purchased by your agency in FY 2000 **$475,118 or total number of contracts awarded**_____

3. Were there any technical impediments to increasing the amount of building insulation products containing recycled materials purchased by your agency in FY 2000? (If yes, please attach an explanation of the technical impediment.) **Yes, see Attachment E.**

F. Engine Coolants.

1. For agencies that maintain fleet maintenance facilities, how many fleet maintenance facilities do you operate? **21**

2. How many vehicles are maintained? **6,287**

3. How many of your fleet maintenance facilities own and operate anti-freeze recycling equipment? **11**

G. Structural Fiberboard and Laminated Paperboard.

1. Total dollar amount of structural fiberboard and laminated paperboard purchased by your agency in FY 2000 **$80,213 or total number of contracts awarded**_____

2. Total dollar amount of structural fiberboard and laminated paperboard containing recycled materials purchased by your agency in FY 2000 **$65,842 or total number of contracts awarded** _____

3. Were there technical impediments to increasing the amount of recycled materials for structural fiberboard and laminated paperboard purchased by your agency in FY 2000? (If yes, please attach an explanation of the technical impediments.) **Yes, see Attachment F.**

H. Carpet (low and medium wear polyester fiber only).

Provide any pertinent information to demonstrate your agency's compliance/commitment to purchasing carpet (low and medium wear polyester fiber) in FY 2000. This information could include dollars spent, number of contracts, policies issued, pilot projects, etc.

Total dollars spent on carpet: **$914,918**
Dollars spent on carpet with recovered materials: **$377,129**

I. Floor Tiles (rubber or plastic only)

Provide any pertinent information to demonstrate your agency's compliance/commitment to purchasing floor tiles (rubber or plastic only) in FY 2000. This information could include dollars spent, number of contracts, policies issued, pilot projects, etc.

Total dollars spent on floor tiles: **$118,298**
Dollars spent on floor tiles with recovered materials: **$59,693**

J. Traffic Cones and Traffic Barricades (rubber or plastic only).
GSA will provide data for agencies' purchases of traffic cones and traffic barricades and those with recycled materials. **However, please provide amounts for agencies' purchases from any other sources.**

1. Total dollar amount of traffic cones and traffic barricades purchased by your agency in FY 2000 **$8,815**

2. Total dollar amount of traffic cones and traffic barricades with recycled content purchased by your agency in FY 2000 **$6,769**

K. Office Recycling and Waste Containers (plastic, paper or steel)

Provide any pertinent information to demonstrate your agency's compliance/commitment to purchasing office recycling and waste containers (plastic, paper or steel) in FY 2000. This information could include dollars spent, number of contracts, policies issued, pilot projects, etc.

Total dollars spent on office recycling and waste containers: **$88,333**
Dollars spent on office recycling and waste containers with recovered materials: **$66,212**

L. Plastic Desktop Accessories

GSA will provide data for agencies' purchases of desktop accessories and plastic desktop accessories. However, please provide amounts for agency purchases from any other source.

1. Total dollar amount of desktop accessories purchased by your agency in FY 2000 **$257,723**

2. Total dollar amount of recycled content plastic desktop accessories purchased by your agency in FY 2000 **$126,072**

M. Toner Cartridges

GSA and DLA will provide data for agencies' purchases of toner cartridges and recycled toner cartridges. However, please provide amounts for agency purchases from other sources.

1. Total dollar amount of toner cartridges purchased by your agency in FY 2000 **$5,435,684**

2. Total dollar amount of recycled toner cartridges purchased by your agency in FY 2000 **$2,628,089**

N. Binders (chipboard and plastic covered, not cloth)

GSA will provide data for agencies' purchases of binders and chipboard and plastic covered binders. However, please provide amounts for agency purchases from any other source.

1. Total dollar amount of binders purchased by your agency in FY 2000 **$1,007,097**

2. Total dollar amount of recycled content chipboard and plastic covered binders in FY 2000 **$228,820**

O. Plastic Trash Bags.

Provide any pertinent information to demonstrate your agency's compliance/commitment to purchasing plastic trash bags in FY 2000. This information could include dollars spent, number of contracts, policies issued, pilot projects, etc.

Total dollars spent on plastic trash bags: **$799,315**
Dollars spent on plastic trash bags with recovered materials: **$640,414**

II. Specifications. RCRA, Section 6002 (d) requires that Federal activities that have responsibility for preparing specifications: review them to eliminate unnecessary requirements for the use of virgin materials and prohibitions against using recovered materials; and add preferences for recovered materials.

A. Does your agency have responsibility or control over a particular Federal supply class or group of specifications or standards?
Yes X No

B. How many product specifications, standards, Commercial Item Descriptions (CIDs), product descriptions or similar documents does your agency control? Number **577**

C. How many such documents have been reviewed in FY 2000?
Number **311**

D. How many documents were modified in FY 2000 to remove the requirements for the use of virgin materials? Number **537 (all specifications, including those for which DOE has responsibility or control over a Federal Supply Class, or group of specifications or standards)**

E. How many documents were modified in FY 2000 to remove references of language prohibiting the use of recovered materials?
Number **502 (all specifications, including those for which DOE has responsibility or control over a Federal Supply Class, or group of specifications or standards)**

F. How many documents were modified in FY 2000 to add preferences for recovered materials? Number **870 (all specifications, including those for which DOE has responsibility or control over a Federal Supply Class, or group of specifications or standards)**

G. Does your agency have a policy to remove the requirements for virgin materials and add preferences for recovered materials to these service contracts? (I.e. including the use of re-refined oil in your vehicle service contracts). **Yes X No**

H. If your agency does have a policy like the above, please provide a copy to us. **See "Acquisition Letter 2000-3 Greening the Government Requirements in Contracting" under *http://twilight.saic.com/ap/guidance.htm* and the proposed revisions to DOE Acquisition Regulations at *http://twilight.saic.com/ap/Farnopr.pdf*.**

I. If your agency does not have a policy, please provide an explanation.

III. Solid Waste Prevention

Please report solid waste prevention efforts for facilities for which your agency is responsible.

A. Did you institute new solid waste prevention practices in FY 2000?
Yes X No

B. If the response is Yes, please provide an explanation of those practices.
Yes, see Attachment G.

C. If the response is No, please provide an explanation of why not.

IV. Recycling.

A. What percentage of the offices/sites operated by your agency have an active office products recycling program? **90 Percent**

B. What percentage of residential housing operated by your agency have an active household products recycling program? **Not Applicable**

C. What percentage of demolition projects managed by and/or contracted by your agency includes the recovery of construction materials? **84 Percent**

D. What percentage of your total solid waste was diverted to recycling?
43 Percent

V. Miscellaneous

A. Has your agency established an internal awards program per the requirements of Executive Order (E.O.)13101?

Yes X No

If the response is YES, provide a description of the awards program.
See *http://twilight.saic.com/Wastemin/AwardsMenu.htm* for information on DOE's awards program.

If the response is No, provide an explanation of why an internal awards program has not been established.

B. Has your agency established guidance for your credit card holders on E.O. 13101 per the requirements of the E.O.?

Yes X No

If the response is Yes, provide a description of the credit card guidance.

See DOE's Government Purchase Card Manual at *http://www.pr.doe.gov/purchcar.htm*.

If the response is No, provide an explanation of why there is no agency credit card training on E.O. 13101 and green purchasing.

C. Did your agency participate in an Environmentally Preferable Products and Services (EPP) pilot project per the requirements of E.O. 13101?

Yes No X

If the response Yes, provide information on the number, description, and status of the EPP pilots.

If the response is No, provide an explanation of why your agency has not participated in an EPP pilot project per the requirements of E.O. 13101.

Based on Section 503 of EO 13101, participation in EPP pilot projects is encouraged, but not required.

Attachment A
DOE Purchase of Environmentally Preferable Products (EPP)

Princeton Plasma Physics Laboratory decided to utilize an Environmentally Preferable Product, in addition to the carpet squares with 25% recycled content pile, in the renovation of the main office building lobby. The EPP item used instead of PVC floor tile was porcelain floor tile. This tile product is much more expensive than PVC floor tile, but we are claiming them as a EPP for the following reasons: 1. Porcelain tiles are made of naturally occurring clays and minerals. 2. Porcelain tile is friendly to the indoor environment: it produces no fumes or gases, will not support mold, mildew or bacterial growth, and can be maintained without the use of harsh chemicals. 3. Porcelain tile has a long life cycle that results in fewer replacements and reduced waste. In fact, porcelain may outlast as many as five installations of many other materials. 4.When porcelain is replaced, it produces low-volume, environmentally stable material, lowering disposal costs and reducing environmental impact.

Princeton Plasma Princeton Laboratory also purchased several octagon shaped picnic tables manufactured of 100% recycled plastic in the amount of $3,226 in FY 2000.

Attachment B
Technical Impediments for Cement and Concrete

Albany Research Center

Material not available.

Bonneville Power Administration

Sites are often located in remote areas where recycled product is not available within a reasonable time frame.

Brookhaven National Laboratory

Small quantities for fence post work. Too expensive for a small job.

East Tennessee Technology Park

Employees reported instances where recycled content cement was not available in small quantities (bags).

Grand Junction Office

Needed to purchase cement in order to complete project in timely manner and our stores warehouse does not carry cement. It had to be purchased locally and was the only type available.

Hanford Site (Fluor Daniel Hanford Northwest)

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 weather months.

Knolls Atomic Power Laboratory (KAPL)

Bags of mortar cement were purchased for maintenance activities. Masonry cement with recycled content is not available. KAPL will continue to evaluate available suppliers of cement products for availability.

Lawrence Berkeley National Laboratory (LBNL)

Companies bid small construction jobs (such as pouring pads) using the best price for concrete. Berkeley Lab specifications with EPA recycled-content items apply to large projects. Concrete at LBNL typically contains flyash. The amount varies--depending on the individual mix design.

Los Alamos National Laboratory

Concrete and cement containing fly ash or furnace slag is not available in this area at a reasonable cost or within a reasonable delivery time.

Pacific Northwest National Laboratory

$35 of the purchases were allowed exceptions because of lack of availability of concrete with fly ash in such a small quantity as this particular job called for.

Sandia National Laboratory-California

Concrete/cement containing blast furnace slag is not available in California.

Savannah River Site

Design documents and schedule determine allowable cure time for cement and concrete. In our area of South Carolina approximately 28 days are required for the curing of cement or concrete containing fly ash versus around 7 days for regular concrete.

Strategic Petroleum Reserves

Not available locally. Lack of Affirmative Procurement awareness led to other virgin purchases.

Western Area Power Administration

Concrete containing fly ash and slag are not readily available in many regions of Western's 15 state operation area. Use of these products is entirely dependent upon location and availability. One of our offices reports "Mix designs that use fly ash are slower in reaching optimum strength and the concrete used is placed in smaller batches so the concrete suppliers just use off-the-shelf mix."

Yucca Mountain Site Characterization Project Office

Cement is produced locally by several vendors. There are no industrial processes that generate flyash 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 transportation cost.

Attachment C
Technical Impediments for Motor Vehicle Oil

Albany Research Center

Fleet maintained by GSA.

Argonne National Laboratory-East

The item with recovered materials is not available competitively within a reasonable time frame.

Bettis Atomic Power Laboratory

The oil purchased (SAE 140) was not available with re-refined content. We will continue to check the marketplace for re-refined oil that meets these specific requirements.

Hanford Site (Fluor Daniel Hanford Northwest)

Not all types of lubricating oils/products were available with the required recovered content.

Idaho National Engineering and Environmental Laboratory (INEEL)

INEEL fleet operations purchases its SAE 30W and 15W-40 as re-refined oil through Defense Supply Center Richmond (DSCR). DSCR is a federal source of supply, therefore, INEEL's purchasing activity for these 2 types of oil is not being reported. 5W-30 oil is supplied for the INEEL as bulk and purchased from a local supplier as a virgin product. A competitive bid process concluded that an unreasonable price premium would be paid for the 5W-30 re-refined oil from DSCR. Re-refined lubricating oils have not been approved for adequate performance in non-vehicular applications such as emergency generators, incinerators, and machine shop equipment.

Knolls Atomic Power Laboratory (KAPL)

Re-refined oil was not available to the vehicle maintenance subcontractor and did not meet the performance specification for some heavy equipment. KAPL will continue to evaluate available suppliers for availability and quality and work with the vehicle maintenance subcontractor to use recycled products.

Los Alamos National Laboratory

Through the end of FY00, GSA vehicles had to be serviced with virgin oil to maintain the warranty.

Miamisburg Environmental Management Project

Warranty issues.

Oak Ridge National Laboratory

Some special oil is not available recycled.

Oak Ridge Y-12 Plant

The Y-12 Garage has tested 1030 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 which causes the oil to heat up and break down. The garage has changed the purchase of oil to only one type which is purchased in bulk ($4.00/gallon) and used on all vehicles and equipment. The current oil is 1540 and is not readily available at the bulk cost in re-refined from the vendor. Used oil is currently bulked and sent to an offsite recycler and/or used in a heater that burns waste crankcase oil for heat in the garage facility. The AVID vendor was contacted in November 2000, and the requirements for Y-12 to use re-refined oils and lubricants was discussed. The vendor was also asked about the availability of 1540 grade re-refined oil. The vendor stated that 1540 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 1540 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.

Oak Ridge Operations Office

Use of lubricating oils containing recovered materials voids manufacturer's warranty.

Santa Susanna Energy Technology Engineering Center

Re-refined oil is not considered suitable for the best performance of the trucks, forklifts and back-hoe used in this hilly facility.

Southwestern Power Administration

Performance issues for off-road, heavy duty use.

Strategic Petroleum Reserves

Time - Re-refined oil was not available in time. Lack of Affirmative Procurement awareness led to virgin purchases.

Western Area Power Administration

One of our offices reports: "The quality of oil containing recovered materials does not meet standards required by use in heavy equipment. Based on past experience in using lubricating oil with recovered materials, the product did not perform well in the heavy equipment that it was purchased for."

Yucca Mountain Site Characterization Project Office

All project vehicles are leased from GSA and fall under the terms and policies of the lease. GSA determines when vehicles require servicing and which vendor is to be used to perform that servicing. The use of re-refined lubricating oil was not possible during FY 2000 because it was not available in the local area from an authorized GSA vendor. Additionally, a memo was received from GSA stating that some manufacturers advised that the use of re-refined lubricating oils might void the warranty because the lubricants do not adhere to manufacturer's specifications.

Attachment D
Technical Impediments for Retread Tires

Albany Research Center

Tires purchased were specialty tires for non-passenger equipment. Retread tires are not available for this specialty equipment. Fleet maintained by GSA.

Argonne National Laboratory-East

The item with recovered materials is not available competitively within a reasonable time frame.

Bettis Atomic Power Laboratory

Retread tires for forklifts (solid rubber) and scooter tires are unavailable in the marketplace. In another case, the Safety Department disallows the use of pneumatic retread tires on forklifts used to lift hazardous material. We will continue to check the marketplace for retread tires that meet our specifications.

Brookhaven National Laboratory

1) Lack of vendors in the area selling auto and light truck tires.
2) Prices are higher than virgin tires.
3) Minimum of tire sizes available.

East Tennessee Technology Park

Time required to change retread tire is significantly longer (3:1 ratio) than for a virgin tire because the retreads do not line up and fit easily requiring additional time and manpower (cost prohibitive).

Fermi National Accelerator Laboratory

Lead times for retreads are 2-3 weeks and all sizes are not readily available.

Fernald Environmental Management Project

The only tires available through our retreader vendor are 16" and above. Passenger cars are installed with new tires, because they are below 16". Certain circumstances such as contamination issues and bad or no casings prevent from procuring retread tires. Also, other industrial equipment require new tires, because retreads are not available.

Grand Junction Office

Per GSA Specifications.

Hanford Site (Fluor Daniel Hanford Northwest)

Majority of the vehicle fleet is governed by GSA regulations, often prohibiting the use of retreaded tires. The widespread use of metric sizes also hinders attempts to utilize retreads.

Idaho National Engineering and Environmental Laboratory (INEEL)

All tires used at the INEEL, both new and retread, are purchased through GSA contract, a federal source of supply. Reporting is only required if purchasing from nonfederal source of supply.

Knolls Atomic Power Laboratory (KAPL)

Retread tires are not available for certain heavy equipment. Use of retread tires on emergency vehicles is not recommended due to the possibility of premature failure. KAPL will continue to evaluate available suppliers.

Lawrence Berkeley National Laboratory

Retread tires are not available for unique special purpose industrial vehicles.

Oak Ridge National Laboratory

Retreads for cars and light duty trucks are not cost effective. Some off-the-road vehicles do not have retreads available. A total of 589 tires fell into these categories.

Oak Ridge Y-12 Plant

There is a contract in place with a recycle vendor to take back used cores and replace with a retread for a nominal fee. However, the vendor has refused the used cores due to the heavy use and condition of the tires after use. This has resulted in a $90 core charge per tire for retreads. In addition, there is a considerable amount of time required to change a retread tire as compared to a virgin tire (3:1 ratio) (0.5 vs. 1.5 hr at ~$50/hr). The retreads do not line up and fit easily, thus additional time and manpower are required to change the tires. All of the used tires are sent to a recycle vendor, however, the purchase of retreads for the Y-12 Plant has not been cost effective. Also, the vendor was contacted in November 2000. Retread tires are not available for the Heavy Earth Moving Equipment in this area. Therefore, the vendor does not supply retreads for this equipment.

Pantex Plant

(1) Unreasonable Pricing -- A letter has been received from the tire vendor stating, "At this time, we cannot support a retread tire program on accounts buying new tires at government prices." The letter explains that the nearest qualified retreader is located too far away from Amarillo for the vendor to make a profit on the tires, especially when tires are already purchased at the government price. Additionally, a letter was received from the local GSA Amarillo Fleet Service Center stating they have "determined that retread tires will not be purchased for vehicles leased to DOE/Pantex."
(2) Doesn't Meet Specifications -- The Transportation Safeguards Division does not allow the use of retread tires on Safe Secure Transports. Due to the nature of their cargo, it is expected that this position will be maintained in the future. Therefore, Pantex Plant anticipates a low compliance percentage for retread tires.

Sandia National Laboratory-New Mexico

There is a conflicting DOE safety order requiring the purchase of Michelin tires; therefore, retreads could not be purchased. Retread tires cannot be used or are not available on secure transport vehicles, heavy equipment, or nonstandard size wheels.

Santa Susanna Energy Technology Engineering Center

Retread tires are not used at this facility for safety reasons. The terrain at this facility is very hilly and many roads are not fully paved.

Savannah River Site

Emergency Response vehicles on site are not allowed to use retread tires due to Safety issues related to speed of travel.

Southwestern Power Administration

Safety issues for off-road utilization.

Strategic Petroleum Reserves

Time - Emergency purchase (retread not available in time)
Availability - Retreads not available for sizes purchased.
Lack of Affirmative Procurement awareness led to virgin purchases.

Western Area Power Administration

Western recently established a policy of not purchasing retread tires for non-passenger vehicles based upon safety reasons and a lack of federal standards. Also, one of our offices reports: "Tires purchased are for heavy equipment, retreads don't hold up well. The tires come apart very quickly."

Yucca Mountain Site Characterization Project Office

Project vehicles are leased from GSA and are therefore subject to the lease terms and policies. GSA has stated that retread tires are to be used only on heavy equipment and not on passenger cars or light and/or medium duty trucks. The project may take vehicles for service only to businesses authorized by GSA.

Attachment E
Technical Impediments for Building Insulation

Argonne National Laboratory-East

The item with recovered materials is not available competitively within a reasonable time frame. The item does not meet reasonable performance specifications.

East Tennessee Technology Park

More than 97% of the insulation purchases were confirmed purchases of piping insulation for which recycled content product was not available.

Hanford Site (Fluor Daniel Hanford Northwest)

Recycled product was not available within the time frame required.

Lawrence Berkeley National Laboratory (LBNL)

Insulation is normally required for quick repairs to LBNL facilities and there is insufficient time to formally solicit for products containing recovered material. LBNL developed a specification for use of designated EPA items for construction projects and this is being used for purchases of insulation and other EPA items by subcontractors in major construction projects.

Los Alamos National Laboratory

Regional vendors don't currently provide recycled insulation at competitive prices.

Savannah River Site

Per design requirements insulation required did not have a recycled content available to meet requirements.

Attachment F
Technical Impediments for Structural Fiberboard and Laminated Paperboard

Grand Junction Office

In order to finish project in a timely manner, fiberboard had to be purchased locally and it was the only type available.

Knolls Atomic Power Laboratory

Material was purchased for an optics laboratory that required medical grade material which is not available with recycled content.

Attachment G
Solid Waste Prevention Practices

Albany Research Center

Implemented better recycling programs site-wide with more enhanced collection. Implemented an on-site chemical management system that ensures that excess chemicals are not purchased without checking other on-site sources first - this prevents duplicating efforts and minimizes bench stock.

Ames Laboratory

Computer screens and other related equipment will be sent to a recycler.

Argonne National Laboratory-East (ANL-E)

1. ANL-E implemented a Beverage Container Recycling Program in FY00. The program recycles glass, plastic, aluminum, steel and Styrofoam containers.
2. Expanded the solid waste recycling programs into new areas across the facility (i.e. Argonne Guest House).
3. ANL-E developed a pilot program to exchange surplus office supplies across the facility.
4. Continued to assess and improve existing solid waste recycling programs at ANL-E.

Brookhaven National Laboratory (BNL)

BNL has a contract with the township to recycle aerosol cans and antifreeze from our motor pool and staff shop areas.

Chicago Operations Office

Federal employees participate in Argonne National Laboratory's mixed office paper program at near 100%. New beverage container receptacles have been deployed for Federal employees to aid Argonne's sanitary waste recycling goals.

Environmental Measurements Laboratory (EML)

EML generates mostly office waste. Efforts are focussed on enhancing employee recycling of paper goods and beverage containers.

Hanford Environmental Health Foundation

We began an effort to recycle cardboard rather than putting it in the dumpster to be taken to the city land fill.

Hanford Site (Fluor Daniel Hanford Northwest)

1. Hanford site is participating in a nationwide program of recycling wireless (cell) phones to victims of domestic violence. Over 100 were recycled in FY00.
2. Lunchroom recycling increased from 37,417 lbs. in FY99, to 62,290 lbs. in FY00.
3. Wood pallet recycling increased from 77,740 lbs. in FY99, to 111,720 lbs. in FY00.
4. 11,217 lbs. of cardboard cartons were recycled.
5. Overall, cardboard recycling increased by 65% from the previous FY.

Idaho National Engineering and Environmental Laboratory (INEEL)

1. INEEL resumed recycling office paper and cardboard following the closure of the INTEC cuber facility, which was dismantled and sent to Savannah River.
2. A subcontract was approved with a local business to receive wood chips from the INEEL as fuel for a wood-fired steam boiler. The wood chips contained plywood and small amounts of paper mulch and landscaping products.

Kansas City Plant

The only NEW practice instituted in FY2000 was fuel blending of a solid waste stream, rather than landfilling or incinerating the waste.

Lawrence Berkeley National Laboratory (LBNL)

Recycling of diskettes and pallets.

LBNL received a grant from Alameda County to purchase new recycling containers for the collection of mixed paper waste.

The increased recycling awareness from the addition of the new bins has improved the overall recycle numbers for the year.

LBNL forced our office supply vendor to substitute recycled content items for in 34 categories.

Lawrence Livermore National Laboratory (LLNL)

-Pipette box return to vendor for recycling
-Office paper recycling program slated for expansion in FY'01, to include newspapers, magazines, soft and hard bound reports, and external phone books.
-Expanded the number of collection points for site-wide cardboard recycling.
-Implemented beverage container recycling program at the three LLNL, Livermore site

cafeterias.
-Began preparation of site-wide comprehensive opportunity assessment.
-Provided a booth regarding waste diversion, as well as sat on the Planning Committee, for the Energy, Science & Environment 2000 event held Oct. 19th at the Oakland Federal Bldg. This event was covered in a Tri-Valley Harold article.
-LLNL conducted a resource conservation outreach program for local school children.
-LLNL conducts an annual holiday tree pick-up. The trees are chipped and utilized as an on-site soil amendment.
-A Tyvek recycling program has been coordinated for National Ignition Facility (NIF) operations. This is a mail back program and the company will pay a small revenue that would be tracked back to the account NIF uses to purchase new Tyvek.
-Held annual Earth Expo event to keep employees aware of waste diversion programs and environmentally preferable products and technologies.
-Internal/ external awareness activities including on-site newspaper (Newsline advisories and presentations to employees as needed.
-LLNL implemented a shrink-wrap recycling program for shipping and receiving operations.

Los Alamos National Laboratory

The Laboratory opened a Material Recovery Facility for solid, sanitary waste. Recyclables are pulled out of the waste stream for recycle rather than landfill disposal.

The Laboratory had large volumes of wood after the Cerro Grande Fire which were sold to the public rather than landfilled.

Nevada Test Site (Bechtel Nevada)

We began recycling unwanted electronic media.

Oak Ridge National Laboratory

Ink jet cartridges are now being collected for remanufacture and reuse.

Oak Ridge Operations Office

Yes, established contract to recycle metals.

Oak Ridge Y-12 Plant
DONATION OF POWER POLES TO KNOXVILLE ZOO.
BATTERY RECYCLE (including lead-acid batteries: Various types of batteries (gell cell, industrial, lead-acid, and automotive) batteries are recycled at the Y-12 Plant.

TIRE RECYCLE: The Y-12 Plant sends their used cores to an offsite recycler.
BUILDING 9712 (GARAGE) RECYCLING ACTIVITIES: At the Y-12 Garage, Building 9712, major gains have been made in the way of recycling. Used batteries are picked up by the vendor for recycling. Drums of used cores are also picked up by the vendor for recycling. The cores consisted of such items as Water Pumps, Air Conditioning Compressor pumps, Master Cylinders, Wiper Rotors, Window Openers, Alternators, Distributors, Rack-pinon, Carburetors, Fuel Pumps, Clutch, pressure plates, Blower Motors, Brake Calipers, Torque Converters, Power Steering Pump, Brake Pads, and Brake Shoes.
SCRAP METAL RECYCLE: Scrap metal is recycled at the Y-12 Plant.
MIXED PAPER WASTE: Mixed paper is recycled at the Y-12 Plant.
FILE FOLDER PAPER: File folder paper is recycled at the Y-12 Plant.
CARDBOARD RECYCLE: Cardboard is recycled at the Y-12 Plant.
ALUMINUM BEVERAGE CAN RECYCLE: The Y-12 Plant recycles their aluminum beverage cans and donates revenues received to local charities.
TONER CARTRIDGE RECYCLE: The Y-12 Plant recycles and purchases recycled toner cartridges.
INSTRUMENTATION RECYCLE: Various types of instrumentation are recycled at the Y-12 Plant.
COAL ASH REUSE: The Y-12 Plant uses the coal ash for beneficial reuse as fill material at the Y-12 Landfill. Since the material is used for filler, there are not cost savings associated with this project.

Pacific Northwest National Laboratory

The Office Product Exchange is a depot for excess office products and, thereby, a source of free office products. When staff have excess office products with no place to store them, they send them to the Office Product Exchange. The product is then listed on the Internet and advertised in our internal newsletter so staff needing such a product know of its availability.

Pantex Plant

Wood Recycling - Pantex Plant has contracted with a regional coalition of cities to recycle scrap lumber, pallets, brush, and other wood products. The only requirement is that the wood is not treated lumber. The coalition has recently purchased a horizontal grinder and will move the grinder as required by the different cities to grind brush and scrap wood. Pantex has a contract to have approximately 5000 cubic yards of wood recycled this year. For this year only, Pantex is transporting the wood to the nearest city in the coalition where the actual recycling takes place. In the future the coalition will bring the grinder to Pantex. This temporary arrangement will allow all of the personnel from the coalition to be trained in the use and maintenance of the grinder. The wood

from Pantex, approximately 225 metric tons, will provide sufficient feedstock at a single location to train all of the personnel from the eight cities in the coalition. By partnering with the coalition, Pantex will help defray the costs for a regional recycling program. The cities in the coalition range in population from 2,000 to 17,000 and encompass most of the central Texas Panhandle. Pantex has benefitted from this partnering in that the Plant has not been required to dig a new landfill cell for the two years the wood has been accumulating. Also the cost for disposal has been eliminated. The total net savings for Pantex from the project is $6,530.

The Pantex vehicle maintenance facility (VMF), in partnership with the General Services Administration (GSA) fleet manager at Pantex, have begun a program to replace the antifreeze in fleet vehicles with a longer lived coolant. The new coolant (Texaco Extended Life) will essentially remove the need to replace the antifreeze in fleet vehicles. Prior to this program the coolant was replaced in accordance with manufacturer's instructions as a preventive maintenance item every two years. The removed antifreeze was recycled by Pantex Plant personnel to meet manufacturer's specifications and was then reused. The useful life of the new Texaco coolant exceeds the amount of time the vehicles will remain on site which will preclude the necessity of replacing the coolant. The program is being implemented by requiring the new fleet vehicles to be equipped with the new coolant. This removes any warrantee questions and gives the vehicle manufacturer's approval to the new coolant and the increased maintenance periods. The amount of antifreeze requiring recycling has been reduced by 152.5 gallons during FY00. This is equivalent to 1335 pounds or 0.6054 metric tons of waste. This is not sanitary or hazardous waste. It is NON-HAZARDOUS STATE REGULATED CLASS 1 INDUSTRIAL SOLID WASTE as defined by the State of Texas. It has been classified as hazardous for this report because there is no classification that accurately describes this category of waste. There is no waste cost savings associated with this source reduction because the cost to recycle the old antifreeze is negligible. The savings comes from not having to change the coolant and for FY00 that amounts to $1445.

Princeton Plasma Physics Laboratory (PPPL)

Every year for the last three years PPPL has held a America Recycles Day (ARD) Event for the PPPL employees. On November 9, 1999, PPPL celebrated ARD by hosting the Environmental Protection Agency WasteWise Broadcast Forum on Buying Recycled along with The New Jersey Department of Environmental Protection (NJDEP). Shaw Commercial Carpet, Inc. and NJDEP gave presentations on how businesses and facilities can Buy Recycled. A presentation was given to PPPL staff and visitors on the Laboratory's progress in Recycling and Buying Recycled. The Laboratory Director presented 10 awards to PPPL's 1999 "Green Machines": staff members whose efforts to Reduce, Reuse, Recycle and Buy Recycled helped PPPL

exceed its goals in Fiscal Year 99.

Rocky Flats Environmental Technology Site (RFETS)

1. A Standard Operating Protocol for concrete reutilization was finalized 9/28/99 and implemented in FY00.
2. Collection of unwanted commercial software for recycle was instituted.
3. A new procedure for recycling cardboard collection boxes used for the collection of office and mixed paper was instituted.
4. Consolidation of lab packs began, reducing the number of industrial drums required.
5. Food waste from the 2000 RFETS Family Day celebration was composted.
6. Multiple excess items (including gloveboxes, tanks, trailers, etc.) were reutilized at the Site rather than disposed.
7. Magnesium oxide crucibles were transferred for reuse within the DOE complex.
8. Clean soil in a Site excavation project was reutilized.
9. Decommissioning of concrete well pads led to the reutilization of the concrete in an erosion control project.

Sandia National Laboratory-California (SNL/CA)

In FY00, SNL/CA started recycling Carpet tiles by sending them to Collins and Aikman. Yard waste is now taken to the Vasco Landfill where it is weighed and included in the landfill's composting program.

SNL/CA recycles office paper, junk paper (newspapers, magazines, catalogs, etc.), cardboard, toner cartridges, aluminum cans, tires, fluorescent light tubes, transparencies, scrap metal, batteries, engine oils, coolant, laboratory glass, metal drums, oil filters, and construction debris.

Sandia National Laboratory-New Mexico (SNL)

SNL implemented a coolant recycling process at the SNL machine shop to reduce coolant waste and purchases. Pollution Prevention (P2) staff conducted assessments at two SNL cafeterias and identified opportunities to reduce their solid waste generation and increase recycling. Both facilities converted to reusable dishware to eliminate the disposable dishware solid waste stream.

Santa Susanna Energy Technology Engineering Center

Many materials, e.g. steel and concrete, are salvaged and recycled.

Savannah River Site

During 2000, waste generators implemented over 70 Pollution Prevention projects resulting in an avoidance of approximately 416,000 cubic feet of radioactive and hazardous solid waste. The estimated annualized savings from these projects are $21.9 million, with projected life cycle savings of $72 million.

Strategic Petroleum Reserves

One exploration and production (E&P, commonly called "oil field") waste stream - used wireline grease - generated at the Bryan Mound site is shipped off site and used as a fuel. Used wireline grease was tested and meets state and federal requirements for used oil burned for energy recovery (UOBE).

Thomas Jefferson National Accelerator Facility

Transparencies are now collected and sent back to manufacturer.

Waste Isolation Pilot Plant

A compactor and bailer were purchased to prepare waste for recycling.
We perform the sorting of waste increasing the amount of waste identified for recycling.
A reusable plastic cup program was introduced to reduce the amount of Styrofoam cups used at our dining facilities.

Yucca Mountain Site Characterization Project Office (YMP)

The YMP has had an effective and proactive waste minimization program in place for many years. The YMP is currently attempting to identify processes for diverting solid waste that is not already part of this proactive program. Additionally, changes have been made to purchasing instructions requiring those initiating a purchase to comply with 40 CFR 247 or provide a written justification which complies with one of the three categories sanctioned by E.O. 13101. This will be strictly adhered to.