UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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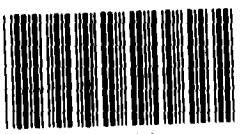
PROCUREMENT, LOGISTICS,
AND READINESS DIVISION

B-209740

DECEMBER 8, 1982



The Honorable Berkley Bedell
Chairman, Subcommittee on Energy,
Environment, and Safety Issues
Affecting Small Business
Committee on Small Business
House of Representatives

Dear Mr. Chairman:

Subject: Used Oil Collection and Disposal Practices Followed by Federal Agencies (GAO/PLRD-83-12)

This report is in response to your March 31, 1982, letter requesting that we review certain matters related to used oil collection and disposal practices of selected Federal agencies. Specifically, you asked that we

--review actions taken by the Department of Defense (DOD) in response to recommendations in our 1977 report 1/ on ways DOD could improve oil recycling;

--compare waste oil recovery and disposal policies of several agencies, including agencies in the New York City area;

--determine what role the Environmental Protection Agency (EPA) had played in developing Government policy on used oil recovery; and

--assess whether EPA or any other Federal agency had developed an effective Government-wide policy to insure environmentally safe and conservation-oriented handling of used motor oil.

On July 21, 1982, we gave members of your staff an interim briefing on our findings. The information you requested is summarized in this letter. The first subject listed above, DOD's actions on our 1977 report, is addressed in more detail in enclosure I, and the other three subjects are discussed in enclosure II.

1/"Ways the Department of Defense Can Improve Oil Recycling" (LCD-77-307, Sept. 28, 1977).

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DOD ACTIONS IN RESPONSE TO OUR 1977 REPORT

In response to our 1977 report, DOD agreed that used oil should be considered an asset which should be recycled as a lubricating oil when feasible and that it could manage the product better. It also agreed to evaluate how well its installations recovered and reused or disposed of waste oil and to improve its policies and procedures where necessary.

In June 1979, DOD established oil recycling and reuse policy and guidance for the military departments and defense agencies. This policy and guidance essentially implemented the recommendations in our 1977 report.

Our followup review found that many DOD installations and activities were not following this guidance. Used oil collection and disposal practices tend to mitigate against used oil refining, and some activities were selling used oil when they could have burned it more economically as a fuel.

In a September 17, 1982, report 1/ (see enc. I), we recommended that the Secretary of Defense direct the Army, the Navy, and the Air Force to follow the DOD guidance. We also recommended that he direct a trial of a closed-loop arrangement for refining used oil generated at a large installation or several installations close to one another.

WASTE OIL RECOVERY AND DISPOSAL PRACTICES OF SELECTED AGENCIES

We reviewed used oil collection, storage, and disposal practices at nine vehicle and equipment maintenance shops operated by four civil agencies in the New York City area. In addition, we had earlier reviewed such practices at four maintenance facilities operated by the General Services Administration (GSA) and the Postal Service in the Cincinnati, Ohio; San Antonio, Texas; and Washington, D.C., areas. The practices of the New York City area agencies were similar to those we had observed in these other parts of the country.

Used oil disposal policy at most agencies visited in the New York City area recognized the importance of environmental protection and resource conservation but provided little or no specific guidance on how to handle used oil. However, we found no instances when agencies appeared to be disposing of their used oil in environmentally damaging ways. In most cases the agencies were selling or giving their used oil to collectors, who appeared to be selling it to other users. Giving used oil away when it can

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1/"Opportunities for Improved Oil Recycling Still Exist" (GAO/PLRD-82-113, Sept. 17, 1982).

be sold violates Federal property disposal regulations. We are bringing this to the attention of the agencies whose activities were giving away used oil.

EPA'S ROLE

The Used Oil Recycling Act of 1980 required EPA to promulgate, by October 15, 1981, regulations establishing performance standards and other requirements necessary to protect the public health and the environment from hazards associated with recycled oil. EPA is currently sponsoring several research projects to gather the information to quantify the extent of hazardous materials in used oil. Preliminary results indicate hazardous adulteration of used oil is the norm rather than the exception. This research is scheduled for completion by the end of 1982. Proposed regulations are expected to be ready for evaluation in the summer of 1983, and implementation is planned for the summer of 1984.

LACK OF GOVERNMENT-WIDE POLICY ON HANDLING USED OIL

We found no formal Government-wide policy specifying how Federal agencies must handle their used oil to insure protection of the environment and conservation. Most Federal environmental protection and resource conservation laws passed since 1970 emphasize that used oil recycling that is carried out in an environmentally sound way is in the best national interest. Because these laws primarily address protection of the environment and public health, any used oil conservation achievements are likely to be byproducts of efforts in these areas.

As your office directed, we did not obtain official agency comments on this report.

Sincerely yours,

Donald J. Horan

Donald J. Horan
Director

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

PROCUREMENT, LOGISTICS, AND READINESS DIVISION

B-208825

SEPTEMBER 17, 1982

The Honorable Caspar W. Weinberger
The Secretary of Defense

Attention: Director, GAO Affairs

Dear Mr. Secretary:

Subject: Opportunities for Improved Oil Recycling Still Exist (GAO/PLRD-82-113)

We have performed a followup review of how Department of Defense (DOD) activities collect and dispose of used oil. In response to the recommendation in our prior report, 1/ DOD established in June 1979 an oil recycling and reuse policy and guidance for the military departments and defense agencies on collecting and disposing of used oils. The policy recognized used lubricating oil as a valuable natural resource and an asset because it possesses two basic reuse characteristics which offer significant economic benefits; that is, it is a renewable resource since it can be re-refined and reused or it can be burned as a fuel or fuel supplement.

The military departments and defense agencies were directed to (1) maximize the recovery and collection of used lubricating oil, (2) maximize the sale of used lubricating oil for the purpose of re-refining, (3) burn the used lubricating oil as a fuel or fuel supplement if no reasonable arrangements can be made for recovery by re-refining, and (4) discontinue any disposal practices that are not environmentally acceptable.

Our current review disclosed that many DOD installations and activities are not following this guidance. We found that collection and selling practices tended to mitigate against the re-refining of used oil. We also found that some activities were selling used oil when they could have burned it more economically as fuel.

1/"Ways the Department of Defense Can Improve Oil Recycling" (LCD-77-307, Sept. 28, 1977).

(943182)

ENCLOSURE I

BACKGROUND

With the advent of the energy crisis, conservation options once considered uneconomical or impractical have become much more attractive. One such option, re-refining used lubricating oils, has received a great deal of attention in recent years. About 50 to 60 percent of all automotive lubricating oil used in this country is recoverable. Thus, the potential energy savings are huge.

Because its lubricating properties never wear out, used oil can be re-refined to its basic characteristics and reused repeatedly. Although from an energy conservation standpoint, re-refining is the preferred approach, used oil also can be used as a fuel. In the past, used oil was frequently used to control weeds and dust or it was disposed of through open dumping, practices which are harmful to the environment.

The Congress has shown increased interest in promoting better use of the United States' renewable energy resources. Legislation has been enacted to reduce the Nation's dependence on foreign sources of petroleum products and to protect the environment through better used oil conservation. Since 1972 the Congress has passed at least four laws that address better conservation of used lubricating oils.

--The Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500.

--The Energy Policy and Conservation Act of 1975, Public Law 94-163.

--The Resource Conservation and Recovery Act of 1976, Public Law 94-580.

--The Used Oil Recycling Act of 1980, Public Law 96-463.

Actions mandated by these laws included a study of the problems associated with achieving increased recycling of used oil, a program to develop test procedures for establishing the equivalency of re-refined oil to new oil, and the elimination of legal requirements that recycled oils be labeled as such.

Annual lubricating oil consumption by DOD activities is estimated to be in the tens of millions of gallons. Because these activities obtain and consume lubricating oils in numerous and diverse ways, comprehensive data on lubricant usage and used oil disposals are not available. However, we found that, during 1980, the Defense Fuel Supply Center, which buys petroleum products for all Federal agencies, issued about 26 million gallons of lubricants, hydraulic fluids, and related petroleum products. Military activities also made undetermined additional acquisitions locally and through contract maintenance.

About 50 to 60 percent of all lubricants consumed by DOD activities are recoverable. These products are used as fuel, sold, or given away.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to assess DOD's implementation of recommendations made in our 1977 report on used oil recycling. The 1977 report recommended that the Secretary of Defense

--institute an information system to provide a basis for developing policies and procedures for recovering used oil,

--classify used oil as an accountable asset to better control its disposal, and

--investigate the feasibility of making regional agreements with re-refiners to process used oil into resalable lubricants.

The information needed to satisfy our objective was obtained in the following ways. During the review, we

--examined various public laws, regulations, directives, instructions, reports, studies, and other documents on used oil conservation and reuse;

--interviewed personnel from DOD activities and from the private sector who are knowledgeable about used oil collection, disposal, and recycling;

--obtained and analyzed available statistics on used oil collection and disposals by DOD activities;

--evaluated used oil collection, storage, and disposal practices at 15 DOD installations (see enc. I).

The DOD installations were evenly distributed between the three services and included both large and small generators of used oil. We made this review in accordance with GAO's current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions."

DOD COLLECTION AND DISPOSAL PRACTICES NEED IMPROVEMENT

In June 1979 DOD established oil recycling and reuse policy and guidance for the services and DOD agencies. The services had adopted and, in most cases, incorporated the DOD policy into their own regulations. However, failure to aggressively implement this policy and guidance has resulted in the loss of numerous opportunities to achieve better conservation and economic use of used lubricating products.

The services did not provide adequate guidance to vehicle maintenance shops on how to properly collect and dispose of their used oils. In addition, they did not monitor used oil collection and disposal practices to identify those that were inefficient or not achieving program goals so they could be modified. We found that used oil was

--seldom segregated by type and often contaminated with water and trash,

--being sold when it could be burned more economically as fuel,

--being sold for purposes other than re-refining, and

--being sold in small uneconomical quantities.

We believe that by improving its collection and disposal practices, DOD can make used oil more attractive to re-refiners and also enhance the product's market value.

Used oil was seldom segregated by type and was often contaminated

Failure to segregate used oil by type and to minimize contaminants makes used oil more difficult and costly to re-refine and reduces its market value. Only 1 of the 15 installations we visited effectively segregated its used lubricating products.

One buyer told us that the re-refining process can be adjusted to accommodate some types of mixed products, but used oils that are clean and segregated produce a re-refined oil of better quality and the economics of the re-refining process are improved. The buyer told us used oil collected from DOD installations is generally of poor quality and that he recently terminated two purchase contracts because the used oil was too dirty to re-refine.

At the base segregating used oils, we found that from January 1979 through August 1980, the Defense Property Disposal Office at Kelly Air Force Base sold 17,000 gallons of used jet turbine oils, which had been segregated during collection, at an average price of 66 cents a gallon, with some selling for as much as 90 cents a gallon. Had the jet oils not been segregated, they would have been sold as part of the mixed oils at a much lower price. For example, 263,000 gallons of mixed used crankcase oils, sold by the same disposal office during a similar period, averaged only 14.3 cents a gallon.

At present, used jet oils are not re-refined, but are used to manufacture plastics. However, the Air Force is engaged in research which may lead to the technology needed to restore jet turbine oils to a condition suitable for their original use.

We found many instances of used oil being contaminated. For example, one storage site at Kelly Air Force Base consisted of a concrete slab with a 6-inch high retaining wall. The slab contained about 400 55-gallon metal drums of used oil, which were standing in a 5-inch deep water and oil mixture. Heat fluctuations had caused the drums to expand and contract, absorbing rain water and expelling it as an oily mixture which drained into a nearby stream.

One used oil buyer would no longer bid on used oil in 55-gallon drums because their small size makes them uneconomical to handle and process. Bulk tank storage is more economically attractive to a wider range of buyers who are likely to bid higher.

A bulk storage system has been used successfully at Fort Hood, Texas. The installation has over 100 bulk storage collection points equipped with 500- to 1,200-gallon storage tanks. The post has a contract with a re-refiner to periodically pickup the used oil at each storage site. In addition to getting a better price for the used oil, the installation is avoiding substantial costs that would be required to consolidate the products at one central collection point. Installation officials provided no cost data, but indicated that before the current arrangement, five to eight personnel and two vehicles had been required to collect and dispose of the used oil.

By collecting used oil in larger, more economical quantities, we believe the potential for contract re-refining will be enhanced. However, should re-refining prove to be not feasible, the product is still likely to be more attractive and to sell at a higher price. We believe the Defense Property Disposal Service (DPDS) regions can effectively consolidate used oil sales on a geographic basis and lower its administrative costs by reducing the number of individual disposal transactions.

Most used oil is sold for purposes other than re-refining

Although DOD policy stresses that used oil should be sold for re-refining, current management practices do not assure buyers will use it for that purpose. In most instances, used oil was sold to firms dealing in fuel oil and road oiling or it was sold to firms acting as brokers who sell the product for whatever use their buyer wishes.

DOD installations generally collect their used oil centrally and report it to their local Defense Property Disposal Office for disposal. DPDS advertises the used oil for competitive sale and sells it to the highest responsive bidder. Eleven of the 15 DOD installations were selling their used oil through DPDS. Used oil from the other four installations was being burned as fuel. The buyers were engaged in the following types of businesses.

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Type of buyer	No. buyers	Gallons sold	Percentage of total gallons
Re-refiner	1	128,842	22.6
Plastics manufacturer	1	9,033	1.6
Fuel oil sales	6	298,031	52.3
Road oilings	3	a/4,600	.9
Broker	1	128,900	22.6
Total	b/12	569,406	100.0

a/Estimated.

b/One installation had two buyers--one for synthetic jet oils and one for other products.

Frequently, re-refiners cannot or will not compete for used oil offered for sale by DPDS. According to the President of the Association of Petroleum Re-refiners, the largest problem facing re-refiners is their inability to compete in the marketplace for used oil. While re-refiners have substantial collection, processing, administrative, and overhead costs, other types of used oil buyers incur significant costs only for collection and distribution. Consequently, buyers marketing used oil as a fuel or for road oiling are difficult to compete with. Additionally, used oil collected by Federal installations was frequently so contaminated with water and trash that it was unacceptable for re-refining.

Since revising its specification for engine lubricating oil for administrative service vehicles in 1980 to allow use of re-refined products, DOD has done little to promote the use of these products by its activities. Its policy and guidance memorandum states that large installations should consider negotiating for "closed loop" 1/ re-refining arrangements as a way to further enhance the net value of used lubricating oil and thus reduce the cost of replacing it with more expensive virgin lubricating products.

The closed loop concept is used extensively in the re-refining industry. Railroads and industrial firms frequently contract with re-refiners to have their used oil restored to its original condition. In Government, the State of North Carolina uses a closed-loop system to collect used oil generated by State and municipal vehicles, re-refines it, and returns it to users. During the first year of operation, which ended in March 1982, the North Carolina program recycled 250,000 gallons of used oil through its closed-loop system.

1/Collecting used oil, having it re-refined, and returning for reuse.

In May 1981 the Mobility Equipment Research and Development Command (MERADCOM) at Fort Belvoir, Virginia, proposed a demonstration project to set up a closed-loop system to collect used oil at military installations in Virginia and North and South Carolina. The used oil was to be re-refined under contract and used in MERADCOM vehicles to evaluate product performance.

The U.S. Army Material Development and Readiness Command discouraged MERADCOM from initiating the plan because it believed the project would impose an unnecessary burden on the installations involved and because the responsibility for selling used oil rests with DPDS. Consequently, MERADCOM did not move forward with the project.

Used oil can be used effectively as a burner fuel

DOD policy requires that used lubricating oil be burned as a fuel or fuel supplement if no reasonable arrangement can be made for recovery by re-refining. We found that it is frequently not used for this purpose and often is sold to buyers who do use it as fuel.

We found that used oil generated at only 4 of the 15 installations we visited was being burned as fuel. These installations were Fort Bragg; Quantico Marine Base; Naval Operating Base, Norfolk; and Little Creek Amphibious Base.

Facilities engineers of each military department told us any heating plant using number 6 fuel oil can burn used lubricating oil. The Army indicated that most of its installations have at least one heating plant that uses number 6 fuel oil. The Navy estimated that about half of its bases have such equipment and the Air Force estimated that a third of its bases can burn used oil as heating fuel.

During the 12-month period ended in February 1981, the naval complex in Norfolk burned nearly 4 million gallons of reclaimed diesel and used lubricating oil in installation heating plants. The Navy Public Works Center purchased these products from the Navy fuel depot for 35 cents a gallon or about 56 percent less than regular number 6 fuel oil, which sold for 79 cents a gallon.

At Fort Bragg, essentially all of the installation's used oil is burned in the 82d Airborne Division's heating plant. During 1980 the installation disposed of about 60,000 gallons of used oil in this way.

CONCLUSIONS

By improving their collection and disposal practices, DOD activities can make their used oil more suitable for re-refining and also enhance the product's market value. This can be done by:

--Collecting them in ways that segregate recoverable products, such as automotive and jet turbine oils, by type (when economically feasible) and keeping them clean.

--Storing them in bulk containers to reduce storage and handling costs.

--Disposing of used oils at installations in the same geographic area collectively to offer large quantities of used oil which make re-refining more feasible and reduce disposal costs.

DOD activities should also cease the practice of selling used oil when it can be burned more economically as fuel.

Finally, we believe that the closed-loop re-refining arrangement has excellent potential for economically improving the use of used oil at large installations. Although DOD policy and guidance stresses the importance of most of these factors, we found they generally had not been put into practice.

RECOMMENDATIONS

Accordingly, we recommend that you direct the Secretaries of the Army, Navy, and Air Force to follow DOD's guidance in the collection and disposal of used oil. We also recommend that you direct a trial of the closed-loop arrangement for re-refining used oil generated at a large user installation or several installations in close proximity to one another. If this trial shows this arrangement to be a beneficial way of using used oil, it should be extended to as many locations as is feasible.

AGENCY COMMENTS

We discussed a draft of this report with DOD officials. They agreed that improvements could be made in collecting and segregating used oils at military installations. They did not agree with our overall conclusions and recommendations. They felt that we had not adequately addressed the economics of an existing capability for re-refining. We have modified our conclusions and recommendations accordingly.

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As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of

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the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Secretaries of the Army, Navy, and Air Force; the Director, Defense Logistics Agency; the Director, Office of Management and Budget; and the Chairmen of the appropriate congressional committees.

Sincerely yours,

Donald J. Horan

Donald J. Horan
Director

Enclosure

ENCLOSURE I

DOD INSTALLATIONS VISITED

DURING THE REVIEW

Department of Army

Fort Belvoir, Virginia
Fort Bragg, North Carolina
Fort Campbell, Kentucky
Fort Hood, Texas

Department of Navy

Norfolk Naval Operating Base, Virginia
Norfolk Naval Air Station, Virginia
Little Creek Amphibious Base, Virginia
Navy Yard, Washington, D.C.
Quantico Marine Base, Virginia

Department of Air Force

Andrews Air Force Base, Maryland
Bolling Air Force Base, Washington, D.C.
Kelly Air Force Base, Texas
Langley Air Force Base, Virginia
Randolph Air Force Base, Texas
Wright-Patterson Air Force Base, Ohio

SUMMARY OF FINDINGS CONCERNING USED OIL COLLECTION AND DISPOSAL PRACTICES BY CIVIL AGENCIES

INTRODUCTION

With the advent of the energy crisis, conservation options once considered uneconomical or impractical are now more attractive. One option, reuse of used lubricating oils, has received much attention in recent years. Lubricating oils, unlike some petroleum products, are not fully consumed in use and can be recycled and reused. Although restoring used oil to a condition suitable for its original use is preferred, it may also be used as a fuel supplement. In the past, used oil has frequently been used for wasteful and environmentally damaging purposes, such as dust and weed control.

The Congress has shown increased interest in promoting better use of the Nation's renewable energy resources. Recent legislation has sought to improve environmental quality and resource conservation through better use of used oil.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to review certain matters related to used oil collection and disposal practices. To satisfy our objective, we

--examined public laws, regulations, directives, instructions, reports, studies, and other documents on used oil conservation and reuse;

--interviewed personnel from Federal and State agencies and from the private sector who are knowledgeable about used oil collection, disposal, and recycling;

--obtained and analyzed statistics on used oil collection and disposal by Federal agencies; and

--evaluated used oil collection, storage, and disposal practices at nine civil agency installations.

We made our review in accordance with generally accepted government audit standards.

USED OIL COLLECTION AND DISPOSAL BY CIVIL AGENCIES IN THE NEW YORK CITY AREA

We reviewed used oil collection, storage, and disposal practices at nine vehicle and equipment maintenance shops operated by four Federal agencies in the New York City area. These agencies, whose practices are described below, were:

--U.S. Postal Service: three vehicle maintenance facilities in Manhattan, Brooklyn, and the Bronx.

--General Services Administration: New York interagency motor pool in Brooklyn.

--Federal Bureau of Investigation (FBI): New York Field Office garage in Manhattan.

--U.S. Coast Guard: autocraft shop, motor pool, industrial shop, and post exchange service station on Governors Island.

These nine shops generally performed routine preventive maintenance of motor vehicles and, in some cases, small equipment, such as lawnmowers. The Coast Guard also collected, stored, and disposed of contaminated diesel oil from watercraft.

The nine shops appeared generally clean and well kept, and the storage containers that were observable showed no signs of leaks or spills. Personnel at most facilities told us that their waste products contained no hazardous materials, such as polychlorinated biphenyls (PCBs). We did not try to analyze the hazardous waste content of the used oil, but used lubricating oils from gasoline engines do contain some heavy metal, such as lead, which EPA has designated as a hazardous material.

Except for the FBI, all the agencies visited had given their maintenance personnel some guidance on how to collect and dispose of used oil. This guidance was very general and provided few specific procedures. Most agencies did not keep records on how much waste oil they collected or disposed of. We obtained some figures based on estimated maintenance workloads for motor vehicles and from sales receipts from used oil collectors.

The shops disposed of used oil by selling it or giving it away. The companies that bought oil or had it given to them generally appeared to be brokers who resold the oil.

The following table summarizes selected used oil data on the activities visited.

Agency	Number and type of activities	Potential workload	Gallons collected in 1981	Method of disposal
Postal Service	3 maintenance shops	1,674 vehicles	a/6,980	Sold
GSA	1 motor pool	2,157 vehicles	b/55	Gave away
FBI	1 garage	300 vehicles (note c)	c/1,100	Gave away
Coast Guard	4 maintenance shops	200 vehicles (note c)	d/14,888	Gave away
		20 vessels (note c)		

a/Actual, based upon sales receipts.

b/Most vehicles are serviced by commercial facilities which dispose of the used oil.

c/Estimated.

d/Estimated gallons collected for vehicles and vessels. Vessels generate large amounts of contaminated diesel fuel.

The following case summaries provide more specific information about used oil collection, storage, and disposal practices at each agency visited.

Postal Service

Four vehicle maintenance shops and two auxiliary garages service Postal Service vehicles in New York City. We visited the three largest shops--those in Manhattan, Brooklyn, and the Bronx.

Postal Service guidance on waste oil is limited to some general requirements in its Fleet Management Handbook, which states that

--inflammable liquids should be stored in tanks, approved safety containers, or closed drums;

--engine oil should not be dumped in any sewer or other public drainage system; and

--when possible, waste oil should be sold for recycling.

All three shops collect used oil in drain pails and transfer it directly to holding tanks. Various other liquids, such as brake fluid and transmission fluid, are stored in the same tanks. All the shops were generally clean and orderly; we did not see any evidence of contamination. Personnel told us that no PCBs were mixed with these liquids. Used cleaning solvents are kept in a special sink and disposed of monthly by a contractor.

The used oil from these facilities is sold to a broker, who in turn resells it. For calendar years 1980, 1981, and 1982 (through April), the table below shows approximate amounts of used oil sold by each shop, based on available documentation.

Facility	1980	1981	1982
	--------(gallons)--------		
Manhattan	4,562	5,040	1,030
Brooklyn	1,190	1,270	375
The Bronx	-	670	175
Total	5,752	6,980	1,580

For the above period, the Postal Service received an average of about 15-1/2 cents per gallon, or a total of about $2,243.

GSA

GSA operates vehicle maintenance shops at a main motor pool in Brooklyn and at a subpool at John F. Kennedy Airport. These facilities do routine preventive maintenance on GSA-owned vehicles. They collect, store, and dispose of such products as used lubricating oil and brake and transmission fluids.

We visited the main motor pool maintenance shop in Brooklyn. The motor pool is responsible for 2,157 vehicles, 2,098 of which are permanently assigned to other Government agencies. Many GSA and agency drivers have their vehicles' oil changed at commercial garages, which keep and dispose of the used oil.

We tried to determine how much waste oil the GSA facility had collected and disposed of during the last 3 calendar years, but available records were incomplete. The shop gave 250 gallons of waste oil to a collector in January 1982 and had 550 more

gallons on hand when we visited. GSA personnel said that the shop had always given its used oil away or paid someone to remove it. We told the GSA personnel that some agencies in the New York City area sold their used oil and that the Federal Property Management Regulations allowed such sales when the estimated proceeds did not exceed $1,000. They agreed to contact the GSA National Capitol Region to obtain instructions on how to sell their used oil.

We toured the shop and observed how the waste products were collected and stored. Used oil is initially drained into portable 5-gallon drain pails and then stored in 55-gallon drums until picked up by the collector. We were told that the waste products collected contained no hazardous materials, such as PCBs. The shop was clean and well kept. The storage drums showed no signs of leaks.

FBI

The FBI operates one vehicle maintenance shop in New York City. This facility performs routine preventive maintenance for about 300 vehicles. The lubricating oil in these vehicles is changed about four times a year or once every 4,000 to 6,000 miles. Some waste transmission and brake fluids are also collected. The shop does not keep records of the used oil or other fluids taken from the vehicles, but FBI personnel estimated that about 1,100 gallons were collected annually.

The waste products are stored in 55-gallon drums until given, free of charge, to a local waste oil collector, who sells them. We told FBI officials that some agencies in the New York City area sold their used oil and that the Federal Property Management Regulations allowed the FBI to make such sales if estimated revenue did not exceed $1,000. The FBI subsequently got the firm to which the used oil was being given to agree to buy the oil in the future. The FBI told us it would coordinate the the sale with GSA's National Capital Region, as required by the Federal Property Management Regulations.

Coast Guard

The Coast Guard maintenance shops at Governors Island generate and collect waste oil from automotive and other maintenance facilities and vessels. The waste products are kept at three different storage areas. Waste oil generated by the motor pool and autocraft shop and bilge oils from vessels are stored in the Coast Guard Support Center's main storage facility. The bilge oils are first processed through a water separator. The industrial shop and post exchange service station collect waste oil but provide their own storage.

The motor pool facility maintains about 200 Coast Guard vehicles. It collects waste oil, used brake and transmission fluids, and some cleaning solvents. The waste oil and the brake and transmission fluids are first stored together in 55-gallon drums until moved to the Support Center's main storage area for disposal. The cleaning solvents are stored separately. Waste oil collected by the autocraft shop is first stored in a 200-gallon tank trailer until transferred to the main storage area. The industrial shop, which maintains ship engines, and the post exchange service station store their waste oils in underground tanks until picked up by the waste oil collector.

According to Coast Guard officials at Governors Island, about 15,000 gallons of waste oil were collected during calendar year 1981--11,800 gallons at the main storage area, about 1,000 gallons at the post exchange, and about 2,100 gallons at the industrial shop. All the waste products are given, free of charge, to a local waste oil collector. We informed the officials that this practice violated a requirement that waste oils be reported to the Defense Property Disposal Service for final disposition. Coast Guard officials told us that since Governors Island could be reached only by boat, it had been difficult in the past to get used oil removed from the island. They felt the used oil was being exchanged for a removal service rather than being given away. We also told them that some installations had been able to dispose of their used oil and also achieve fuel savings by burning it in installation heating plants. They agreed to consider our comments on future used oil disposals.

All the facilities visited were clean and well kept. There were no signs that any storage containers leaked or that there was significant spillage. We were told that none of the waste oil collected at Governors Island contained hazardous material.

USED OIL COLLECTION AND DISPOSAL BY CIVIL AGENCIES OUTSIDE THE NEW YORK CITY AREA

Before receiving the Chairman's request, we had reviewed used oil collection, storage, and disposal practices at four maintenance shops operated by GSA and the Postal Service in San Antonio; Cincinnati; and Washington, D.C. Their practices are summarized below.

U.S. Postal Service

San Antonio

The U.S. Postal Service, Main Service Center, in San Antonio supports postal operations in the local metropolitan area and outlying south Texas counties. The Center operates a fleet of

903 motor vehicles, which includes about 480 jeeps; 109 one-half-ton trucks; and various other vehicles, including larger trucks and administrative vehicles.

The fleet manager estimated that 716 of the vehicles were serviced at the Service Center's central maintenance facility, with the balance assigned and serviced in outlying areas. The central maintenance shop performs all levels of maintenance from routine oil and filter changes to major repairs.

The 187 postal service vehicles in outlying areas receive limited services, such as washing and adding oil, through service contracts in their respective areas. Other maintenance services, such as oil changes, motor tuneups, and minor repairs, are provided by the Service Center's mobile service unit. This unit is a 2-1/2-ton truck equipped with engine tuneup equipment and other maintenance apparatus. The unit carries a 55-gallon drum to collect used petroleum products generated during vehicle servicing.

The fleet manager reported that used motor oils collected by the mobile service unit and all used petroleum products generated at the Service Center, including lubricants used on mechanized mail-handling equipment, were collected in a 2,000-gallon underground tank near the maintenance shop.

The Service Center does not have a specific program for managing used petroleum products. Further, records are not kept on used petroleum products generated. However, the fleet manager and the maintenance facility manager estimated that about 4,000 gallons of mixed products were collected by the Center and disposed of each year. All the used oil collected is given to a commercial used oil collector. The fleet manager explained that because the Service Center had no way of segregating used oil from other waste petroleum products, it had been difficult to get someone to take its waste products. He said that he would look into the feasibility of getting additional tanks to remedy this situation. We informed him that locally the Defense Property Disposal Office (DPDO) at Kelly Air Force Base had sold used oil to several companies in recent years. He said that he would try to find out from DPDO who these buyers were and contact some of them.

A small quantity, about 200 gallons, of used oil had been blended with diesel fuel and used in Postal Service vehicles during the 11 months preceding our visit.

Cincinnati

The Cincinnati Post Office garage serves the greater Cincinnati area, which includes part of eastern Indiana, northeastern Kentucky, and southern Ohio. The garage is responsible for maintaining about 950 vehicles, including 22 diesel tractors. Most

of the maintenance is done at the central garage; however, there is a mobile service unit. About 78 of the 950 vehicles are maintained by local service stations under contracts. These vehicles are assigned to post offices that are a long distance from the central garage, but all vehicles are brought to the garage at least once a year.

The garage drains used oil from vehicles through a screen into an outside underground 1,000-gallon tank. This minimizes contamination. The garage has, for several years, sold its waste oil to a commercial firm, which reprocesses it into fuel oil. In recent years, the garage sold from about 2,800 gallons to 4,500 gallons of waste oil annually.

GSA

Cincinnati

The GSA motor pool in Cincinnati serves the greater Cincinnati area, which includes parts of northeastern Kentucky. The motor pool is responsible for approximately 600 vehicles, of which most are assigned to specific agencies. Fifty vehicles are assigned to the garage for dispatch services. These and about 200 vehicles assigned to agencies are serviced by the motor pool. The others are serviced at local service stations.

The manager estimated that from 50 to 60 percent of the oil put into vehicles could later be drained and recovered. The waste oil is stored in 55-gallon drums and is sold to a commercial reprocessor when 10 to 11 drums are filled. The manager estimated that about 800 gallons of used oil were sold annually.

Washington, D.C.

GSA operates a small vehicle maintenance shop at the Washington Navy Yard. The shop performs preventive maintenance, including oil changes and chassis lubrications, on about 10 vehicles per month. According to the shop manager, about 95 percent of the GSA vehicles in the Washington area are serviced commercially; thus, little used oil is collected by the shop.

The used oil drained from GSA vehicles is stored in 55-gallon drums until it is turned over to the GSA sales center for sale. The used oil is turned over in six-drum lots about once a year. The vehicle maintenance area was clean and well kept. The storage drums appeared to be properly sealed and showed no signs of leaking.

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EPA'S ROLE

As a result of the Resource Conservation and Recovery Act of 1976, EPA has developed and promulgated regulations designed to insure safe and effective management of hazardous waste materials. One regulation requires that EPA publish a list of identified hazardous waste materials. The Used Oil Recycling Act of 1980 required EPA to promulgate, by October 15, 1981, regulations establishing performance standards covering such things as collection, storage, and transportation practices for used oil and other requirements necessary to protect the public health and the environment from the hazards associated with recycled oil. These regulations have not yet been issued.

According to the EPA environmental protection specialist with whom we met, oil alone is not considered hazardous, but in use it can accumulate other materials, such as heavy metals and PCBs, which are hazardous. Before the EPA criteria for hazardous materials can be applied, more must be known about the contaminants in used oil, according to this official. EPA is currently sponsoring several research projects which are expected to provide the information needed to determine whether used oil should be classified as a hazardous waste.

Preliminary results of some of this work indicate adulteration of used oil with hazardous waste materials is the norm rather than the exception. One research project involved examining used oil samples obtained from 15 commercial firms. All samples contained high concentrations of heavy metals, and PCBs were found in three cases. Other research will address the significance of environmental impact from disposing of used oil through such methods as burning and road oiling. This research is scheduled to be completed by the end of 1982. Proposed regulations are expected to be available for evaluation in the summer of 1983, and implementation should follow in the summer of 1984.

FEDERAL USED OIL POLICY

There are no formal Government-wide policy statements or regulations which specify how Federal agencies must handle their used oil. Most Federal environmental protection and resource conservation laws passed since 1970, which Federal agencies and the public must obey, have repeatedly emphasized that used oil recycling, especially re-refining, that is carried out in an environmentally sound manner is in the best national interest. Since these laws primarily address protection of the environment and public health, any used oil conservation achievements will be byproducts of efforts in these areas.

The extent of policy and guidance on the handling of used oil issued by individual Federal agencies varies among the agencies

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visited. The waste oil recovery and disposal policies at most of these agencies recognize the importance of environmental protection and resource conservation but provide little or no specific guidance on how to handle used oil.

The Postal Service policy statement stresses the importance of safety. It requires all flammable liquids, including used oil, to be stored in safety containers and prohibits disposal through sewers or public drain systems. The statement also encourages the sale of used oil to recyclers. GSA's policy statement requires that all used oil be sold to recyclers. The Coast Guard has instructed its maintenance facilities to dispose of their used oil in accordance with State and Federal regulations. The FBI had no formal policy for used oil disposal.