

Study of Used Motor Oil Recycling in Eleven Selected Countries

By the Used Oil Working Group
November 1997





One of the most significant long-term trends affecting the future vitality of the petroleum industry is the public's concerns about the environment, health and safety. Recognizing this trend, API member companies have developed a positive, forward-looking strategy called STEP: Strategies for Today's Environmental Partnership. This initiative aims to build understanding and credibility with stakeholders by continually improving our industry's environmental, health and safety performance; documenting performance; and communicating with the public.

API ENVIRONMENTAL, HEALTH AND SAFETY MISSION AND GUIDING PRINCIPLES

The members of the American Petroleum Institute are dedicated to continuous efforts to improve the compatibility of our operations with the environment while economically developing energy resources and supplying high quality products and services to consumers. We recognize our responsibility to work with the public, the government, and others to develop and to use natural resources in an environmentally sound manner while protecting the health and safety of our employees and the public. To meet these responsibilities, API members pledge to manage our businesses according to the following principles using sound science to prioritize risks and to implement cost-effective management practices:

- To recognize and to respond to community concerns about our raw materials, products and operations.
- To operate our plants and facilities, and to handle our raw materials and products in a manner that protects the environment, and the safety and health of our employees and the public.
- To make safety, health and environmental considerations a priority in our planning, and our development of new products and processes.
- To advise promptly, appropriate officials, employees, customers and the public of information on significant industry-related safety, health and environmental hazards, and to recommend protective measures.
- To counsel customers, transporters and others in the safe use, transportation and disposal of our raw materials, products and waste materials.
- To economically develop and produce natural resources and to conserve those resources by using energy efficiently.
- To extend knowledge by conducting or supporting research on the safety, health and environmental effects of our raw materials, products, processes and waste materials.
- To commit to reduce overall emission and waste generation.
- To work with others to resolve problems created by handling and disposal of hazardous substances from our operations.
- To participate with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.
- To promote these principles and practices by sharing experiences and offering assistance to others who produce, handle, use, transport or dispose of similar raw materials, petroleum products and wastes.

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Executive Summary

The study described in this report obtained information about used motor oil collection and recycling programs in eleven selected countries around the world. As the number of motor vehicles, including not only passenger automobiles but also trucks, construction equipment, buses, and other public conveyances increases, countries face a growing need to find ways to collect and reuse the lubricating oil that these vehicles use. In the United States, the American Petroleum Institute (API) has sponsored a range of programs to promote the environmentally protective management and recycling of used motor oil. API and its members have served as a resource for the development of used motor oil recycling programs in other countries, and have a long-term interest in how other countries address used motor oil. API and its Used Oil Working Group therefore sponsored a review of a range of programs, from the most highly developed to the most preliminary, as a means of understanding how a variety of countries are addressing the issue.

The eleven countries examined are, in alphabetical order, Argentina, Brazil, France, Germany, Japan, Mexico, the Philippines, South Africa, Sweden, Thailand, and Trinidad and Tobago. They span a wide range of geographic locations, as well as different economic and political systems. As the study indicates, they have, in particular, many different approaches to used motor oil recycling.

Although a broad range of source materials were examined in the course of the research, in the end much of the most useful information came from person-to-person contacts between API's researchers and key persons in the countries of interest. Literature searches, collections of international legislative materials, and the Internet were used to collect background information, and in some cases (e.g., Germany and France) the Internet, in particular, proved to be a very valuable source of information. The embassies in the United States of the eleven countries, and U.S. embassies abroad, in some cases provided the names of key contacts. Ultimately, a written protocol of questions was sent to one or more contacts in each of the eleven countries. Telephone contacts led to additional sources. Extensive followup telephone interviews were necessary to collect the desired information.

In several countries, little or no data were available on some of the core questions. In particular, information is frequently difficult to obtain on do-it-yourself motor oil changers, especially their numbers and the amounts of used motor oil that they generate. Statistics also do not always distinguish clearly between used motor oil and other categories of used oil. Frequently, too, the definition of what it means to "recycle" used motor oil is imprecise; burning such oil, even burning before impurities have been removed, sometimes is considered recycling.

Recognize that a more structured program about used motor oil is needed. About half of the countries surveyed, including Japan, Mexico, the Philippines, Thailand, and Trinidad and Tobago, have embarked on efforts to learn more about the issue and design programs to address it. Brazil, France, Germany, South Africa, and Sweden, in contrast, seem to have effectively functioning programs at the present time, although the structures of those programs are very different. Brazil has a nationally-mandated program that apparently is implemented, and may vary significantly, on the local level. France and Germany have relatively centralized and prescriptive programs, mandated by national law. Sweden, in contrast, uses a decentralized and non-prescriptive approach. In South Africa, manufacturers of motor oil subsidize the used motor oil collection and recycling program.

The following table summarizes the broad outlines of the programs in the eleven countries. As the table shows, almost all of them rely on collection of used motor oil at service and repair shops. Germany is almost unique in the emphasis it places on the responsibility of motor oil sales outlets to accept used motor oil.

Table 1—Oil Management Program Overview for the Eleven Countries Surveyed

	National Legislation On Used Motor Oil Recycling	Collection of Used Oil at Sales Points	Collection of Used Oil at Service and Repair Shops	Program(s) to Involve Do-It-Yourselfers	Licensed Collectors of Used Motor Oil
France	✓		✓	✓	✓
Germany	✓	✓	✓	✓	
Sweden			✓		
South Africa			✓	✓	
Mexico			✓		
Trinidad & Tobago		✓	✓		
Argentina					
Brazil	✓	✓	✓	✓	
Japan	✓		✓		
Philippines	✓		✓		
Thailand			✓		

Relatively few of the eleven countries have enacted national legislation pertaining expressly to used motor oil. Several have defined used motor oil as a hazardous waste. Such a definition, however, does not always carry with it a high level of attention to enforcement of prohibitions on dumping or other prohibited forms of disposal.

As the report details, only a few countries of the eleven surveyed are currently recycling a high proportion of the used motor oil generated annually. In some cases, in fact, unused recycling capacity is available. In summary, the picture conveyed is one of high potential for increased used motor oil recycling in many of these countries, if the factors that currently are inhibiting recycling can be overcome.

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FRANCE

INTRODUCTION

France is pursuing an active used motor oil management program. Initial used motor oil policy efforts were focused on conserving the nation's oil supply, while later policy measures have concentrated on recycling and re-use for the good of the environment. The laws and decrees created to support used oil recycling have evolved over the years into the legislation that mandates France's current program.

LAWS AND REGULATIONS

General National Policy

The Decree of September 21, 1973, prohibits the dumping of petroleum or petroleum products into navigable waters. This was followed by the Decree of March 8, 1977, which prohibits the dumping of new or used oil in oceans and other bodies of water. General policies such as these led to the Decree of November 21, 1979, which provided the basis for France's used oil management program until revised in 1989 and 1995.

Decree of November 21, 1979 (No. 79-981)

The Decree of November 21, 1979, imposed obligations and restrictions on the collection and elimination of used oil in France. The policy was expected to ensure the effective collection of used oil and the realization of the highest possible economic yield from the used oil collected. This decree defined recycling or regeneration as the acceptable methods of eliminating used oil, although it also allowed for the possibility of other industrial uses, such as combustion. Commercial generators were required to give their used oil to a licensed collector. The collectors of used oil were responsible for its transport to a licensed end use facility, and were granted an exclusive three-year franchise by the French government. Permits were granted on a lowest-bid basis. The price of used oil when sold to end use facilities was established and regulated by Agence Nationale pour la Récupération et l'Élimination des Déchets (ANRED), the agency responsible for the administration of France's used oil management program. The established system, however, proved uneconomical, and the government amended this law with the Decree of August 31, 1989.

Decree of August 31, 1989

The Decree of August 31, 1989, relinquished the French government's control over used oil prices, and eliminated the transportation franchise system. Permits were now issued by the French government to the most qualified transportation firms, who collected and transported the used oil in the most environmentally sound manner. The sale price of used oil was to be negotiated by collectors and end use facilities. The decree also authorized licensed transporters to sell used oil to foreign recyclers who were licensed in an EC Member State.

Law No. 95-101 of February 2, 1995

This law modified Law No. 92-643 of July 13, 1992, addressing the elimination of wastes. Activities such as the elimination of industrial waste are regulated, as outlined in this law, by regional or inter-regional bodies. Moreover, the 1995 law provided that the elimination of used oil, and the activities surrounding this process, was to be a national program regulated by a national entity. The waste oil collection program in France is currently administered by Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME). ADEME is responsible for the following, in order to ensure the collection of used oil:

- Administration of a tax on base oil.
- Participation in the licensing of collectors.
- Participation in the licensing of owners/operators of used oil treatment facilities.
- Intermediary role between the public and concerned professionals.
- Support for the development of technologies associated with the collection and end use of used oils.
- Completion of technical and economic audits on the used oil collection program.
- Implementation of awareness programs, including the placement of "Please Dispose of Properly" stickers on oil containers.

CURRENT USED OIL MANAGEMENT ACTIVITIES

Motor Oil Sales

According to a report produced by ADEME in 1990,¹ a total of 945,576 kilotons of oil is sold annually in France (Figure 1). More than half of this oil is for automotive uses, including passenger car engine oil, heavy duty diesel oil, transmission fluid, and gear oil. Figure 2 demonstrates the distribution of sales within these categories. More than half of the motor oil that is sold, 51.6 percent, is bought at garages and car dealers.² The remainder is sold by supermarkets, service stations, and specialists.

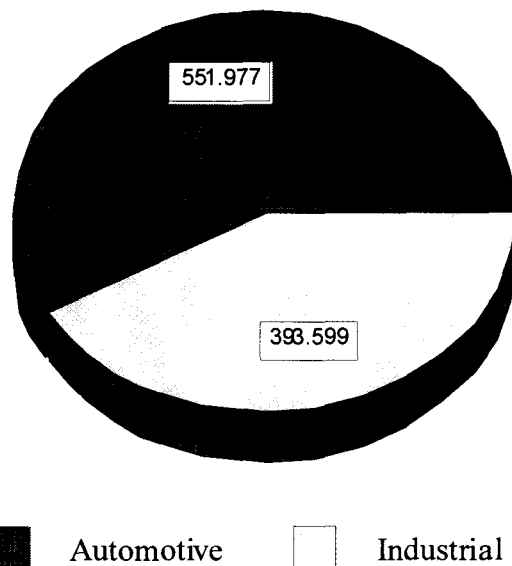
Used Motor Oil Collection

Used motor oil is generated by a number of establishments and businesses. These generators are the persons or legal entities who accumulate within their establishments used oil from business-related

¹ Data from 1990 are the most recent data available.

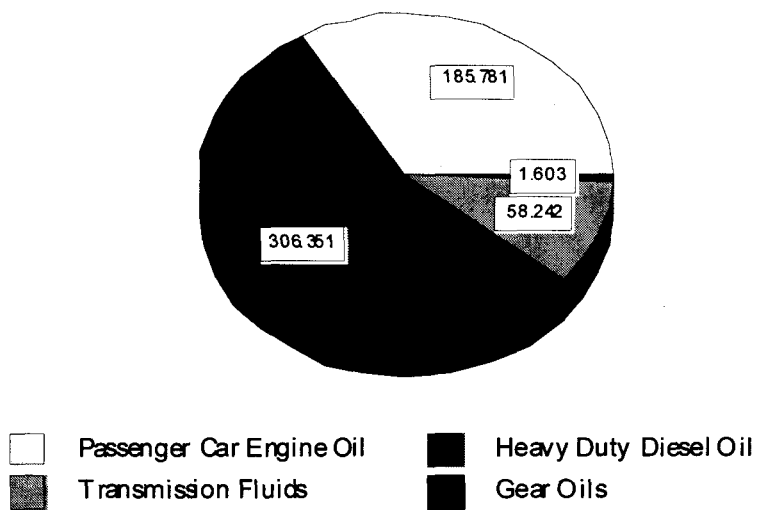
² CONCAWE. *Collection and Disposal of Used Lubricating Oil*. Brussels: November 1996, pp. 82.

Figure 1
1990 Total Oil Sales (KTONS)



Source: ADEME Report.

Figure 2
1990 Motor Oil Sales (KTONS)



Source: ADEME Report.

activities. They are required by law to follow specific procedures, including the separation of used oil and other mixtures during storage. Generators may dispose of the used oil in three ways:

- Sale of used oil to a licensed collector.
- Transport of used oil to a licensed collection establishment.
- Elimination of used oil under a license granted by the Minister of the Environment.

The percentage of DIY-ers in France was estimated in 1991 at 30–35 percent.³ No more recent estimate has been obtained.

Licensed collectors are the persons or legal entities who collect or transport used oil that has been transferred to them by those that generate it. Collectors must be licensed by the Minister of the Environment. As of 1995, 230 collectors were licensed in France.⁴ Licensed collectors are responsible for picking up all used oil quantities greater than 200 liters upon request from a holder, free of charge. Small quantity generators or DIY-ers may dispose of their used oil at a gas station or garage collection site.

The amount of used motor oil that has been collected for end use has increased steadily since 1990. A little over 50 percent was collected in 1990, according to a report produced by the Institut Français de l'Environnement (IFEN). By 1995, IFEN reported that 78 percent of used motor oil was collected for recycling (Figure 3).⁵

In 1990 the total amount of oil collected was approximately 409 kilotons (Figure 4).⁶ Almost three-fourths of this oil was automotive oil. The total amount of used motor oil collected in 1990 was 290,525 kilotons (Figure 5). More than half of the used oil collected is heavy duty diesel oil, and this figure has increased by 1.38 percent since 1989.⁷ HazNews reports that 220,000 kilotons of used motor oil were collected in 1995.⁸

³ American Petroleum Institute. *Used Oil Management In Selected Industrialized Countries*. Washington DC: January 1991, p. 41.

⁴ France. Agence de l'Environnement et de la Maîtrise de l'Energie: Centre d'Angers. *Ramassage des huiles usagées: Liste des ramasseurs agréés*. February 1995.

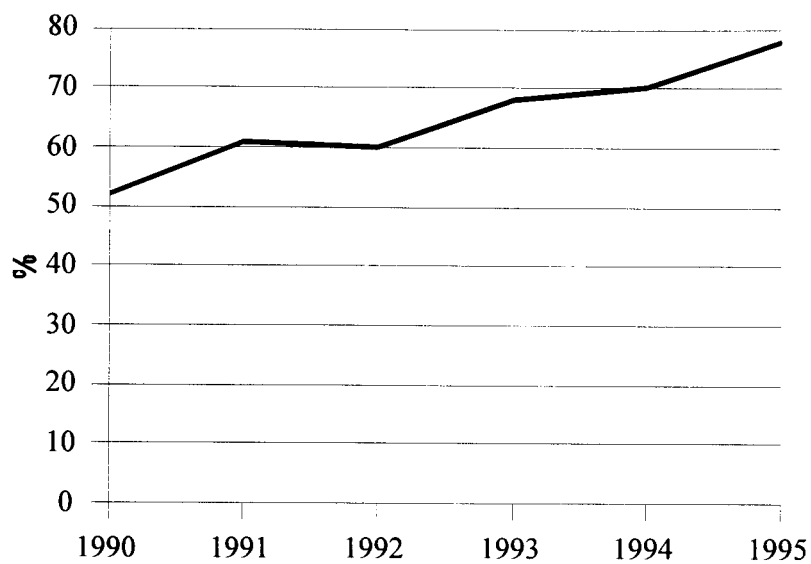
⁵ France. Institut Français de L'Environnement. *Indicateurs de performance environnementale de la France*. Edition 1996–1997.

⁶ France. Agence de l'Environnement et de la Maîtrise de l'Energie: Centre d'Angers. *Collecte et élimination des huiles usagées en France*. Angers: October 15, 1992.

⁷ France. Agence de l'Environnement et de la Maîtrise de l'Energie: Centre d'Angers. *Collecte et élimination des huiles usagées en France*. Angers: October 15, 1992.

⁸ HazNews. *Eco-Huile to Build Second Oil Recycling Plant*. August 1, 1996.

Figure 3
Used Motor Oil Collection



Source: IFEN Report.

Figure 4
1990 Total Used Oil Collection (KTONS)

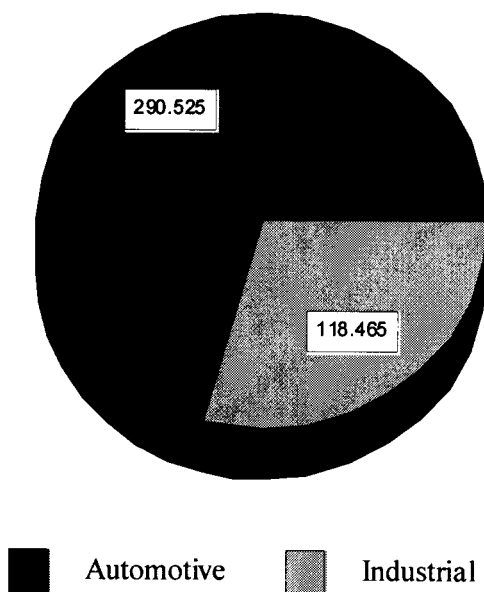
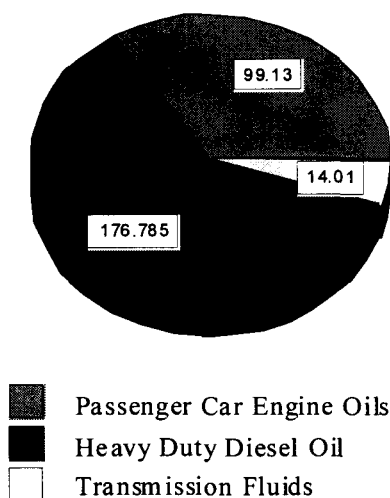


Figure 5
1990 Used Motor Oil Collections (KTONS)



Motor Oil Recycling Facilities

The owner/operator of a used oil treatment facility must be approved and licensed by the Minister of the Environment. Used oil treatment facilities can be re-refining plants, combustion plants, reclaiming plants, or reprocessing plants. At the end of 1991, there were 39 licensed end use facilities: 9 licensed for industrial combustion and 30 licensed for recycling or reprocessing. As of 1995, an additional 14 facilities were licensed for the combustion of used oil, and burned 121.7 kilotons that year.⁹

France's used oil recycling program experienced some problems in 1992 when three recycling plants were forced to close down, reducing treatment capacity from 120,000 kilotons to 80,000 kilotons per year.¹⁰ This crisis was induced by the increasing costs of modernizing old equipment and an all-time low in the price of base oil. Until 1992, oil recycling efforts in France had been efficient and profitable. While all plants were eventually forced to close, the French government upgraded the recycling process and created Eco-Huile, an oil recycling association, in 1993. Eco-Huile was designed to help remove some of the financial burden of used oil collection and disposal.¹¹ The majority of recycling that still occurs is completed by Eco-Huile.

In July 1996, the French company Chimirec opened a new treatment unit to pretreat oil filters for the future recycling of their various components. Chimirec is a company that specializes in collecting and recycling used oil and toxic products.¹²

⁹ France. Institut Français de L'Environnement. *Indicateurs de performance environnementale de la France*. Edition 1996–1997.

¹⁰ HazNews. *Eco-Huile to Build Second Oil Recycling Plant*. August 1, 1996.

¹¹ Escande, Phillippe. *Eco-Huile va piloter le recyclage des huiles usagées*. Les Echos, 1993. This article indicates that in 1992, 80,000 tons of used oil was recycled by Compagnie des Bases Lubrifiantes, who declared bankruptcy in late 1992. Eco-Huile was expected to assume a large portion of this business. The January 1997 edition of *L'Observateur de l'environnement* reported that an American company created in 1994, Puralube, has the capacity to recycle 80,000 tons of used oil per year. Eco-Huile and Puralube are the only facilities presently capable of recycling used oil in France.

¹² CBNB. *Chimirec Opens New Treatment Unit in France*. August 13, 1996.

Amounts and Types of Recycling

ADEME reported that 107,963 kilotons of used motor oil were recycled in 1991.¹³ HazNews reports that in 1995, 220,000 kilotons of used motor oil were collected by licensed private firms and local authorities. Of this, about 100,000 kilotons were recycled by Eco-Huile, and the remainder was incinerated.¹⁴ These data are consistent with data from a 1995 CONCAWE report, which indicate that reprocessing has disappeared as a method of used oil disposal in recent years. Figure 6 demonstrates that direct burning, or combustion, now accounts for 52.1 percent of used oil disposal.¹⁵ This category encompasses cement kilns, power generating plants, steel plants, waste incinerators, and garage heaters. Re-refining of used oil accounts for the second largest quantity, approximately 42 percent annually, while 5.9 percent of used oil is reclaimed.¹⁶

Used Motor Oil Contaminants

An important aspect of used oil management is the prevention of danger posed by used oil contamination. PCB is the contaminant of greatest concern. The French government has prohibited the mixing of used oil with other substances, and collectors are required to sample used oil to identify extreme levels of PCB.¹⁷ Chlorine and heavy metals are also a concern, and studies on heavy metal content have been completed by a number of companies in France.¹⁸

¹³ France. Agence de l'Environnement et de la Maîtrise de l'Energie. *Comite de gestion de la taxe parafiscale sur les huiles de base*. Rapport D'Activite, 1991.

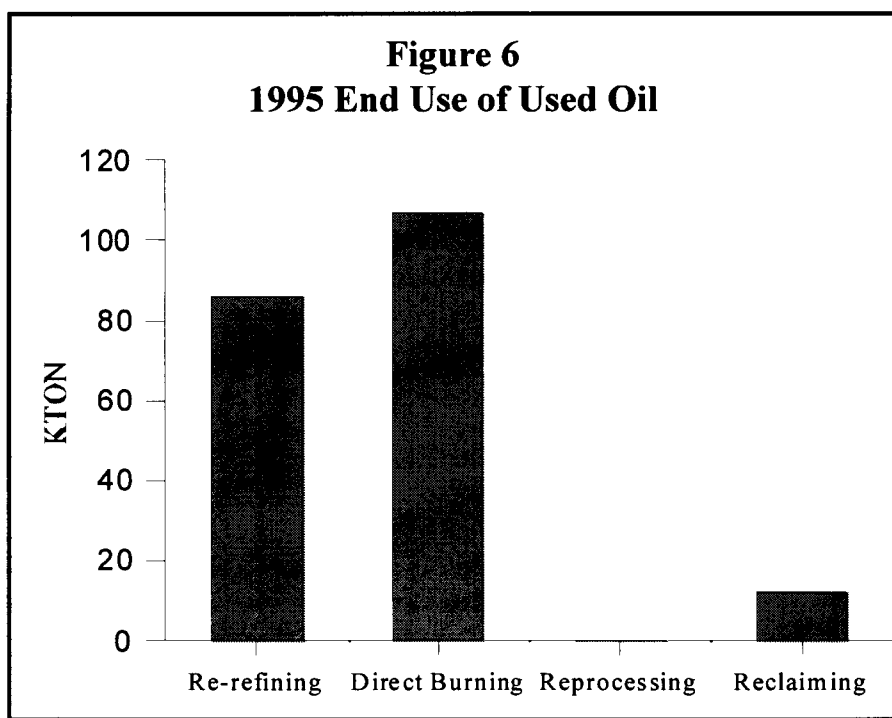
¹⁴ HazNews. *Eco-Huile to Build Second Oil Recycling Plant*. August 1, 1996.

¹⁵ CONCAWE. *Collection and Disposal of Used Lubricating Oil*. Brussels: November 1996, p. 82.

¹⁶ CONCAWE. *Collection and Disposal of Used Lubricating Oil*. Brussels: November 1996, p. 82.

¹⁷ American Petroleum Institute. *Used Oil Management In Selected Industrialized Countries*. Washington DC: January 1991, p. 41.

¹⁸ France. Agence de l'Environnement et de la Maîtrise de l'Energie: Centre d'Angers. *Collecte et elimination des huiles usagées en France*. Angers: October 15, 1992.



Source: CONCAWE Report.

GENERAL PROGRAM INFORMATION

Used Motor Oil Recycling Program Funding

The used motor oil recycling program in France is subsidized by federal taxes. Such taxes are applied to all virgin and regenerated base oils, whether they are produced in France or imported. These taxes are created to facilitate the collection and the treatment of used oil. Money collected is used to subsidize the following persons and activities:

- Collectors of used oil, proportional to the quantity collected.
- Owners/operators of end use facilities that treat and/or eliminate used oil.
- Public education programs, including programs designed for generators of used oil.
- Technical and administrative costs of ADEME's operations.

Specific decrees subsidizing the used oil management program in France are outlined below.

The Decree of August 31, 1989 (No. 89-649) created a tax on virgin and regenerated base oil. This decree modified the original Used Oil Decree of November 21, 1979, as well as the Decree of March 29, 1985. All taxable oils are defined in Article 2 of the decree. The Decree of August 31, 1989, established a tax period beginning in October of 1989 and ending in December of 1992, with a flat tax of 90 French francs per ton of base oil.¹⁹ ADEME was identified as the administrating agency. Due to financial

¹⁹ France. Agence de l'Environnement et de la Maîtrise de l'Energie. *Comite de gestion de la taxe parafiscale sur les huiles de base*. Rapport D'Activite, 1991.

difficulties, the flat tax was raised from 90 French francs per ton to 150 French francs per ton in early 1993. This tax period ran through February 28, 1994. In 1991, 80 million French francs were raised by this base tax, and it is estimated over 75 million French francs were raised in 1992.²⁰ The Decree of August 31, 1994 (No. 94-753) renewed the tax on virgin and regenerated base oil. This decree established a tax period of five years and again identified ADEME as the administrating agency. This tax applies to all base oils defined in Article 2 of the decree, and is limited to 150 French francs per ton of base oil.

Public Education Programs

Public awareness is essential to the success of the used oil management program, and ADEME spends almost one-quarter of a million dollars annually on public education programs.²¹

Future Prospects

The current program appears to be stable. However, the federal taxes currently supporting the program will need to be renewed in 1999, and the program could be reexamined at that time.

²⁰ France. Agence de l'Environnement et de la Maîtrise de l'Energie: Centre d'Angers. *Collecte et élimination des huiles usagées en France*. Angers: October 15, 1992.

²¹ CONCAWE. *Collection and Disposal of Used Lubricating Oil*. Brussels: November 1996, pp. 82.

GERMANY

INTRODUCTION

Used motor oil recycling has followed a pattern of steady growth in Germany. The country regulates the collection, transportation, and disposal of used motor oil. Despite the fact that Germany did away with all subsidies for recycling in 1986, the country boasts a remarkable record associated with the regulation of used oil collection and disposal. One hundred percent of all sales points for motor oil report having collection facilities on or near their premises.²² In addition, of the 690 ktonnes of used oil produced annually, the government reports that 94 percent is returned and is either reprocessed or burned.²³

LAWS AND REGULATIONS

History of Used Oil Management Program

Waste oil, including used motor oil, has been regulated in Germany under a number of different acts. The Used Oil Act of 1968 (*Altoelgesetz*) provided the legal basis for the used oil management system through much of the 1980s. Despite the high percentage of used oil recycled under this program, however, a number of problems plagued the system. Many of these problems stemmed from the act's definition of used oil, which included oil that had been contaminated by such substances as PCBs and PCTs, and from a tax/subsidy system that was set up to help finance the collection and disposal of used oil and lubricants.²⁴ In addition, the law did not take regional and geographical differences associated with oil collection into account, thereby placing heavier burdens on more rural areas that were not in close proximity to a used oil recycling plant or any of the four authorized incineration facilities for contaminated oils.

The Waste Disposal Act of October 6, 1972 (*Abfall-Beseitigungsgesetz, AbfG*) was a federal ordinance that worked in conjunction with the Used Oil Act of 1968. It was based primarily on existing state waste laws, and was directed at monitoring and regulating all wastes, including used oil. This Act incorporated regulations from a number of German states, consolidating and reorganizing them into one uniform, national law. It defined:

- What constitutes waste.
- Who has an obligation to dispose of waste.
- How waste is disposed.
- Where (in terms of authorized facilities) specific wastes can or must be disposed.²⁵

²² CONCAWE. *Collection and Disposal of Used Lubricating Oil*. Brussels, November 1996, p. 84.

²³ Press release: Fachkonferenz in Bonn: "Altoelrecycling muss Vorrang vor Verbrennung erhalten." Dortmund. February 8, 1996.

²⁴ American Petroleum Institute. *Used Oil Management in Selected Industrialized Countries*. Prepared by Andrew Lohof. Discussion Paper #064. January 1991, p. 109.

²⁵ Umweltbundesamt. Waste Avoidance, Recycling and Disposal Act. <http://www.umweltbundesamt.de/uba-info-daten-e/daten-e/waste-avoidance.htm>.

Although the Waste Disposal Act primarily regulated domestic waste, it also included provisions for the federal government to regulate and monitor the import and export of wastes, specifically those that presented a possible threat to the environment.

The Waste Disposal Act of 1972 was replaced in 1986 by the Waste Avoidance and Waste Management Act (*Gesetz ueber die Vermeidung und Entsorgung von Abfaellen, AbfG, BGBl.I*), adopted on August 27, 1986.²⁶ This new act was supplemented by a number of targets, or recycling quotas, and by a number of directives, which were more specific in defining certain wastes and the ways in which they could be disposed (e.g., the Sewage Sludge Directive, the Waste Incineration Plant Directive).²⁷

Waste Oil Ordinance of 1987 (*Altoelverordnung*)

In 1987, the German federal government drafted the Waste Oil Ordinance (*Altoelverordnung*), replacing the Used Oil Law of 1968 and supplementing the general rules set forth under the Waste Law of 1986.

Under German law, consumers are required to return all used motor oil to designated collection sites, from which it is collected for reprocessing, burning, or disposal, depending on the contamination level of the substance. Previously, taxes and subsidies were used to finance the transportation and disposal costs associated with used motor oil recycling. However, the Waste Oil Ordinance adopted in 1987 did away with any government-sponsored subsidy or rebate programs. The German government believed that because there was such high compliance with the law, taxes and subsidies were no longer needed.

The regulations associated with this act revised the definition of used oil to include internal combustion engine oil, transmission oil, mineral motor and transmission oils, and any oils that, "because of the products from which they are derived and where they appear, can be considered for reprocessing."²⁸ In addition, the new ordinance forbade mixing used oil with foreign substances. This was to discourage collectors from contaminating the oil with other substances in order to avoid paying handling and disposal fees for the other substances. In order to help regulate the reprocessing and recycling of used oil, the federal government licensed used motor oil recycling and reusing plants under the Federal Emissions Control Act (*Bundesimmissionsschutzgesetz*).

The Waste Oil Ordinance also changed the regulations associated with the collection of waste oils. The key sections are numbers 8 to 11:

8. Any person or facility that sells unused oil must accept, without charge, a quantity of used engine or transmission oil, equal to any quantity of unused oil they deliver themselves. This applies either when the buyer purchases unused oil in the same quantity as that which is being turned in, or when the buyer can provide evidence of having purchased the same quantity at an earlier date.

9. Sellers of lubricants must display a notice of the requirements for proper disposal of used motor or transmission oil. This can be done either on the packaging of the product or at the point of sale. If the seller is catering to private users of the product, the seller

²⁶ Umweltbundesamt Waste Oil Disposal. <http://www.umweltbundesamt.de/uba-info-daten-e/daten-e/waste-oil-disposal.htm>.

²⁷ Waste Avoidance, Recycling and Disposal Act.

²⁸ Waste Oil Disposal.

also must indicate the location of the collection site for the used oil at the point of sale to encourage DIYs to return the used motor oil for recycling.

10. In circumstances where it is not possible for the suppliers to collect the used oil, they may enter onto a contractual agreement with a third party, such as a filling station or garage, to fulfill their obligations.

11. If there is no collection point at the point of sale, the supplier must indicate where, in the vicinity, a collection point exists for the used oil.

Prior to the adoption of the Waste Oil Ordinance, recyclers of motor oil were required to pick up used motor oil at no charge to the suppliers. Subsidies were paid to the collectors and recyclers to compensate them for the costs associated with the transport, reprocessing, or burning of the oil. These subsidies were financed through taxes imposed on applicable products. Because this and other laws regulating the collection, recycling and disposal were thought to be strictly adhered to by all involved parties, the subsidies were no longer considered necessary and were phased out.

Waste Avoidance, Recycling, and Disposal Act of 7/10/96

In 1993, the German federal government decided to update the Waste Avoidance and Waste Management Act of 1986 to take into account the economic and environmental benefits that could be derived from recycling materials in a market economy. The Waste Avoidance, Recycling, and Disposal Act was signed into law on July 10, 1996. This new act applied the concept of waste from European law to the national level by reinterpreting the traditional definition of waste to include all substances, surpluses and residues that are not produced or used for any specific purpose (i.e., industrial residues).²⁹ Overall, the main goal of the act is to integrate and direct waste management and regulation to more of a recycling economy, and to avoid the production of waste as much as possible, in all stages of production.

The new act places a great deal of responsibility on manufacturers both for their methods of production, and for the end products themselves. Manufacturers are expected to integrate the recycling of substances that are essential to the manufacture of products, such as solvents and oils, in the production cycle of goods and ensure that the final products are environmentally sound in both their use and disposal. End products are expected to be re-usable, have a long life-span, be easily repairable, emit low levels of pollutants, and be either easily recyclable or disposable in an environmentally sound manner.

The act recognizes that the production of some wastes is unavoidable. However, these substances are required to be recycled in an environmentally acceptable manner. Both thermal and material recycling are permissible; however, the more environmentally sound manner has priority. Only those substances that cannot be recycled at any stage of the production cycle may be disposed. A number of supplements to the act define and regulate the substances that may be disposed, and the environmentally appropriate treatment and disposal of these substances.

The directives and guidelines of the law came into effect when the law was signed, and a number of transitional regulations were developed for the directives on waste certification, waste requiring special supervision, and waste transportation. Many of the new regulations, especially those with substantially new regulations regarding the designation of wastes as being recyclable and the materials used, will not come into effect until January 1, 1999.³⁰

²⁹ Waste Avoidance, Recycling and Disposal Act.

³⁰ Waste Avoidance, Recycling and Disposal Act.