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Used Oil: Comparative Legislative Controls of Collection, Recycling, and Disposal

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INTRODUCTION

Industrial society produces a variety of wastes which, because of their potential for reuse or the hazards accompanying improper disposal, should be recycled rather than discarded. Among these recyclable and hazardous wastes is used petroleum oil. Large quantities of used automotive lubricants and industrial waste oils currently are discarded or used in ways that create environmental and health hazards while failing to utilize the energy potential or lubricative capacity which remains in the oil. The continuing energy crisis has focused attention on the need to develop new sources of energy and to maximize the efficient use of existing petroleum resources. New legislation that encourages environmentally sound methods of recycling used oils can help to promote both of these goals.

As states and the federal government in the United States move toward implementation of used oil recycling programs, the existence of model programs for legislatures to consider will prove useful. In the past, federal and state laws in the United States have discouraged the recycling of used
oil. In Europe, however, the Council of the European Communities (EC) and its member nations have launched a program to encourage recycling of used oil under carefully controlled conditions. An examination of the European experience with a variety of used oil collection and recycling programs offers helpful insights into both the advantages of recycling used oil and the problems that must be considered in drafting legislation to do so.

This Article is designed to provide state legislators with appropriate models for used oil programs. It begins with a survey of the environmental and energy conservation aspects of the used oil problem. Next, it examines some of the technical and economic factors affecting the feasibility of used oil recycling programs. The remainder of the Article describes and compares existing and proposed used oil programs in the EC, outlines current United States used oil policy, presents a model bill for a used oil program to be implemented at the state level, and discusses the model bill's reception to date in state legislatures, focusing particularly on new California legislation in this field. Finally, the Article considers whether used oil disposal could be regulated under the Resource Conservation and Recovery Act of 1976, and notes the relationship of the model bill to this new federal legislation for the control of hazardous wastes. Although the discussion is limited to used oil recycling and disposal, the examination of these programs suggests methods for the control of other recyclable resources as well.

I

HAZARDS OF CURRENT DISPOSAL METHODS

Current methods of waste oil disposal in the United States are haphazard and uncontrolled. Because of fragmented collection, rerefining, and disposal systems, information concerning the ultimate disposition of used oil is not altogether reliable. According to the best available estimates, 1.1 billion gallons of used oil are generated annually in the United States. Approximately 480 million gallons of this total (43 percent) are reused as fuel, 90 million gallons (8 percent) are rerefining for use as lubricating oil, and 200 million gallons (18 percent) are reused as road oil or in asphalt. The fate of 340 million gallons (31 percent) is unknown.

1. See text accompanying notes 177-191 infra. Recent federal legislation suggests that Congress is now more receptive to the recycling concept. See text accompanying notes 266-280 infra.
2. These other materials might include paper, glass, tires, chrome, copper, and other metals. All of these are made from resources in need of conservation, and all are technically recyclable and economically suitable for recycling. For general descriptions of the technical and economic aspects of recycling some of these materials, with an emphasis on supply elasticities for secondary materials, see R. Anderson and R. Spiegelman, The Impact of the Federal Tax Code on Resource Recovery, EPA-600/2-76-009 (Oct. 1976) (available as Report No. PB 264 886/AS from the National Technical Information Service, Springfield, Virginia).
3. These figures are taken from ENVIRONMENTAL PROTECTION AGENCY, REPORT TO CONGRESS: WASTE OIL STUDY 1, 25 (Apr. 1974) [hereinafter cited as WASTE OIL STUDY]. The EPA suggests that at least 50 million gallons of the "unknown" quantity "represents the oil in
As these figures indicate, substantial quantities of used oil already are being "recycled," and thus to a degree help to alleviate the increasing scarcity of petroleum products. However, many of these uses pose ecological and health hazards, and controls are needed on the manner in which used oil is recycled. To the extent that used oil is simply discarded, the economic waste of a valuable resource is added to the environmental costs of improper disposal methods. This Article assumes that the maximum feasible quantity of used oils ought to be retrieved in order to mitigate the demand for virgin petroleum products. The remainder of this discussion

acid clay sludges and tank bottoms from re-refiners and reprocessors, most of which is disposed of in landfills and lagoons." Id. at 34. As to the remaining 290 million gallons that is unaccounted for, some portion is used for other legitimate uses such as the oiling of concrete forms in the construction industry. Some is disposed of in landfills and some is accidentally or intentionally dumped either on land or in water. Id.

The data in the following table is dated, but it gives an idea of the relative amounts of used automotive and industrial oils in the fifty states and the District of Columbia.

### Used Oil Generation by State (1971 Data)*

<table>
<thead>
<tr>
<th>State</th>
<th>Automotive (gallons)</th>
<th>Industrial (gallons)</th>
<th>State</th>
<th>Automotive (gallons)</th>
<th>Industrial (gallons)</th>
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<td>4,191,070</td>
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<td>8,846,970</td>
<td>1,633,035</td>
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<td>1,279,087</td>
<td>Nevada</td>
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<td>8,008,590</td>
<td>3,085,107</td>
<td>New Hampshire</td>
<td>1,680,430</td>
<td>257,769</td>
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<tr>
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<td>20,021,638</td>
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<tr>
<td>Connecticut</td>
<td>6,743,770</td>
<td>3,652,711</td>
<td>New York</td>
<td>32,016,880</td>
<td>32,647,853</td>
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<tr>
<td>Delaware</td>
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<td>North Carolina</td>
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<td>North Dakota</td>
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<td>Ohio</td>
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<td>Vermont</td>
<td>1,330,400</td>
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<td>Virginia</td>
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<td>Michigan</td>
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<td>Washington</td>
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<td>2,845,560</td>
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<tr>
<td>Minnesota</td>
<td>14,531,400</td>
<td>3,213,530</td>
<td>Washington, D.C.</td>
<td>1,638,280</td>
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</tr>
<tr>
<td>Mississippi</td>
<td>9,185,500</td>
<td>2,707,690</td>
<td>West Virginia</td>
<td>6,530,830</td>
<td>7,432,560</td>
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<td>Missouri</td>
<td>19,701,750</td>
<td>4,283,712</td>
<td>Wisconsin</td>
<td>17,262,010</td>
<td>5,073,985</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Wyoming</td>
<td>2,563,700</td>
<td>470,723</td>
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</tbody>
</table>


5. See note 3 supra.
focuses on the need for carefully controlled recycling of used oils with a view toward minimizing environmental and health risks associated with improper disposal and reuse.

A. The Hazards of Improper Disposal

Most current methods of used oil disposal create risks of contaminating the air, water, or soil with substances that pose hazards to human, animal, and plant life. The hazards created by incautious use or disposal vary with the quantity of used oil discarded, the types of contaminants contained in the oil, and the method of disposal used.6

Discarding used oil by burning or by dumping it into sewers or on land can have adverse effects of several kinds. Used oils dumped into drains foul connector sewers and treatment plants, thus increasing maintenance costs, reducing treatment efficiency (resulting in more contaminated effluent), and sometimes causing shutdowns.7 Disposal on land may render the soil unproductive8 and, through percolation and runoff, contaminate surface and groundwater supplies.9 Uncontrolled burning of untreated used oils, particularly automotive lubricants, may cause hazardous and unlawful emissions of heavy metal particulates, principally lead.10 In addition, burning may foul incineration equipment11 and present risks of fire or explosion.12

As mentioned earlier, large quantities of used oil are "recycled" through use as road oil or for other dust suppressant purposes. Applying used oil to unimproved road surfaces results in varying degrees of oil runoff, depending on the rate of application and the characteristics of the soil surface. This runoff pollutes surface waters with oil, additives, and any

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9. Id. at B38-B39, B50-B54; S. Maltezou, supra note 7, at 32.
10. The Environmental Protection Agency (EPA) has determined that lead as an air pollutant endangers public health. 40 C.F.R. 80 (1975). On the basis of this determination, EPA's regulations requiring the reduction of lead in gasoline have been upheld. Ethyl Corp. v. EPA, 541 F.2d 1, 8 ERC 1785, 6 ELR 20267 (D.C. Cir. 1976) (This opinion contains a lucid discussion of health effects of airborne lead.) In addition, a federal court has recently ordered EPA to develop ambient air quality standards (NAAQS) for lead. See Natural Resources Defense Council v. Train, 545 F.2d 320, 9 ERC 1425, 7 ELR 20004 (2d Cir. 1976), aff'd 411 F. Supp. 864 (S.D.N.Y. 1976). For EPA's proposed NAAQS for lead, see 42 Fed. Reg. 63076 (1977).
11. S. Maltezou, supra note 7, at 20-29.
other contaminants the oil may have accumulated. In recent years, used oil applied as a dust suppressant has been found to contain such toxic or carcinogenic chemical contaminants as 2,3,7,8-tetrachlorodibenzodioxin, polychlorinated biphenyl (PCB), and 2,4,5-trichlorophenol.

Disposal or recycling of used oil into bodies of water can severely disrupt surface water ecology. First, since the hydrocarbons in oil decompose microbially, their presence in water fosters growth of microorganisms which deplete the waterborne oxygen supply available to other aquatic life. Oxygen depletion, in turn, can impair reproduction and growth of fish and other organisms. Second, oily films on the surface, by blocking sunlight from aquatic plants and by reducing surface aeration, also prevent replenishment of waterborne oxygen by impairing both photosynthesis and direct entry of airborne oxygen. Third, oil contains noxious compounds which even in small concentrations can disrupt marine animal feeding habits. Finally, oil may contain components which are toxic to fish when ingested directly or through consumption of animals lower on the food chain which are contaminated.

B. Toxicity and Carcinogenicity of Used Oil

A serious concern is that improper disposal or recycling of used oil can contaminate drinking water supplies. Not only can this render the water unpalatable, but also, to the extent that used oil contains substances that...
are carcinogenic or otherwise toxic, such contamination can result in serious hazards to human health. Because of their complexity, it is important to discuss the toxic qualities of used oil in some detail.  

The most serious problem in this area is lack of knowledge. Little is known about the activation and impact of carcinogenic substances (i.e., how they act and how they affect the body) and about how to mitigate their adverse effects. Chemical carcinogenesis, a long-neglected area of cancer research, and oil toxicology are only now beginning to be seriously studied. Studies and experiments should be funded to determine whether improper disposal of used oil contributes to an increase in the incidence of cancer, and if so, what segments and percentages of the population are exposed to what levels of risk.

Measurement of the harmful impact of improper used oil disposal is complicated by the fact that the amount of used oil disposed of does not, in itself, determine the toxicity of the constituents of the oil. Many other factors—susceptibility of the affected organism and the potency and physical and chemical form of the toxins—must be taken into account when the potential toxicity of used oil is calculated. Levels of used oil pollution found to be "safe" in a laboratory usually do not take into account long-term biological exposures associated with the growth of cancers, nor can they account for the way in which organisms are affected by carcinogens. More information is needed about the dose-response levels of human beings, i.e., the effect on humans of various amounts and intensities of concentrations of carcinogenic substances. In the absence of such know-

25. This discussion is drawn from W. IRWIN & R. LIROFF, supra note 13, at 16-20. Credit for this research and writing is appreciatively given to Midge Mehlig, formerly a research assistant to the author.

A recently published EPA report mentions that a September 16, 1976 report to the National Science Foundation by David Fine and R. Y. Fan found high levels of nitrosamines in metal-working fluids, often a constituent of industrial used oils. The report to NSF also indicated that nitrosamines could be found in used automotive oil since nitrogen and amine compounds are found in motor oils. ENVIRONMENTAL PROTECTION AGENCY, ASSESSMENT OF HAZARDOUS WASTE MANAGEMENT: PETROLEUM RE-REFINING INDUSTRY 14 (1977) [hereinafter cited as ASSESSMENT OF HAZARDOUS WASTE MANAGEMENT].

26. See 3 INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISK OF THE CHEMICAL TO MAN I passim (1973) [hereinafter cited as I.A.R.C.]; D. BOESCH, C. HERSHER, & J. MILGRAM, supra note 17, at 8, 34; CHEMICAL CARCINOGENESIS: A LONG-NEGLACED FIELD BLOSSOMS, 183 SCIENCE 940 (1974); CAN POTENTIAL CARCINOGENS BE DETECTED MORE QUICKLY?, 183 SCIENCE 943 (1974); DR. SYDNEY SIEGAL, NATIONAL INSTITUTE OF HEALTH, BIOASSAY OF CARCINOGENESIS (TELEPHONE INTERVIEW, JANUARY 15, 1974); COMMITTEE ON BIOLOGIC EFFECTS OF ATMOSPHERIC POLLUTANTS, NATIONAL RESEARCH COUNCIL, PARTICULATE POLYCYCLIC ORGANIC MATTER (1972) [hereinafter cited as NATIONAL RESEARCH COUNCIL].

27. I.A.R.C., supra note 26, at 12; MARTIN, FRESHWATER LABORATORY BIOASSAYS—A TOOL IN ENVIRONMENTAL DECISIONS, in ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, CONTRIBUTIONS FROM THE DEPARTMENT OF LIMNOLOGY, No. 3, at 22-25 (1973) (available from Dep't of Limnology, Academy of Natural Sciences, 19th & The Parkway, Philadelphia, Pa. 19803); ROYA NADEAU, ENVIRONMENTAL PROTECTION AGENCY, EDISON LABORATORY, REGION II (TELEPHONE INTERVIEW, JANUARY 21, 1974); STOCKINGER, SANITY IN RESEARCH AND EVALUATION OF ENVIRONMENTAL HEALTH, 174 SCIENCE 662, 663-64 (1971); DR. SYDNEY SIEGAL, supra note 26.
ledge, it may be necessary to assume that carcinogens universally are "no-threshold" substances presenting the risk of human cancer no matter how minute the quantities ingested through drinking contaminated water.  

Moreover, information about the ultimate fate of some used oil constituents in water is inadequate. The persistence of some hydrocarbons in water is unknown, and it may be that continual releases of used oil into water supplies result in a gradual buildup of carcinogenic material.  

Once the recovery capacity of the environment is exceeded, assimilation is no longer possible. Considerable adverse health consequences may follow this exhaustion of the environment's capacity to absorb harmful material. Furthermore, the interaction of toxic components of used oil with other substances in water may render them even more toxic. Until further research is conducted with used oil obtained from samples received directly from polluted waters or collection facilities and until its various components can be isolated and analyzed, the range of risks at different concentrations for different periods of time will not be understood.

Despite these uncertainties, it is known that some constituents of used oil present health risks to humans. The risks associated with discharge of used oil into drinking water supplies depend on the chemical characteristics of the particular type of used oil. In ascending order of toxicity, the three major groups of hydrocarbons in petroleum oil are alkanes (paraffins or saturates), alkenes (found only in natural gas and in cracked oil products, not in crudes) and aromatics. Weathering (i.e., oxidation, evaporation, and biological degradation) occurs most readily among the alkanes, which are light fuels with low boiling points. For the more toxic aromatics, which are heavier fuels, degradation is an extremely lengthy process, so that contamination of drinking water by aromatics will persist for long periods of time. Moreover, it has been observed that the amount of polynuclear aromatics in

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29. S. Hedtke, The Effects of Waste Oil on Freshwater Aquatic Life 44 (January 14, 1974) (Environmental Protection Agency research report, on file with author); W. Zimmermann, supra note 8, at B50. See also D. Boesch, C. Hersher & J. Milgram, supra note 17, at 33. The persistence problem is exacerbated when oil is absorbed into subsurface estuarine sediments. Id. at 25.

A related problem is that carcinogens in used oil may be ingested by animals low on the food chain, so that, through the process of biological magnification, humans consuming animals higher on the food chain will be ingesting higher concentrations of carcinogens. Information on this problem in connection with used oil is sparse. See id. at 33.
30. Waste Oil Study, supra note 3, at 2, 79; Interview with R. Nadeau, supra note 27.
32. Information in this paragraph can be found in the following sources: D. Boesch, C. Hersher & J. Milgram, supra note 17, at 7; Twort & Fulton, Experiments on the Nature of the Carcinogenic Agents in Mineral Oils, 32 J. Pathology 149 (1929); Woodhouse, The Carcinogenic Activity of Some Petroleum Fractions and Extracts, 48 J. Hygiene 121, 128-32 (1950).
lubricating oil increases after use in a motor vehicle; consequently, used oil is potentially more toxic than unused oil.

At least half a dozen components of mineral oil, including the polycyclic aromatic hydrocarbons, 3:4 benzpyrene, dibenzanthracene, and dibenzpyrene, have been shown to induce carcinomas. Indeed, the polycyclic aromatics are thought to be the principal carcinogens in used oil. Yet, no testing of used oil performed by the EPA laboratories or by others has involved a comprehensive analysis of the hydrocarbons of used oil; rather, testing has dealt almost exclusively with identifying metals and analyzing their effects. Since the only metal found in significant quantities in used oil which is suspected of having carcinogenic effects is cadmium, much time has been lost in this area of used oil carcinogenesis research.

In summary, the ecological and human health hazards posed by pollution of land and water through improper disposal of used oil, although not yet fully understood, argue for increased control on the manner in which used oil is disposed of or recycled. The greatest need is for safe methods of recycling used oil which are both economically and technically feasible. The availability of such methods is the subject of the next section of this Article.

II
ASPECTS OF USED OIL AFFECTING CHOICE OF REGULATORY PROGRAM

In formulating a program designed to minimize environmental and health hazards and to conserve energy, legislators should consider the characteristics of used oil and its place in the economic system. Such factors as the degree to which used oil is dispersed in small quantities throughout a geographic area, the availability of recycling technologies, the existence of markets for recycled products, and the degree to which used oil is segregated from other wastes and free of contamination affect the type of program that will best fit the needs of a particular jurisdiction. By manipula—


35. Gräf & Winter, 3,4-Benzpyren in Erdöl, 152 ARCHIV FÜR HYGIENE 289 (1968); Vehicle Exhausts in Relation to Public Health, 1969 CHEMISTRY & INDUSTRY 290; Steiner, Carcinogenicity of Multiple Chemicals Simultaneously Administered, 15 CANCER RESEARCH 632 (1955); NATIONAL RESEARCH COUNCIL, supra note 26, at 6, 9-10.

36. D. Boesch, C. Hershner, & J. Milgram, supra note 17, at 34.

37. Lemen, Lee, Wagoner & Blejer, Cancer Mortality Among Cadmium Production Workers, 1976 ANN. N.Y. ACAD. SCIENCE 271, 273-79. Lead, a metal found in large quantities in used oil, presents health hazards but is not thought to be a carcinogen. See note 10 supra and accompanying text.
lated the legislative definition of "used oil," the designers of the program can vary the program's coverage to reflect regulatory goals that are practicable in the jurisdiction.

A. Types of Used Oil and Factors Affecting Recyclability

Generally, about 50 percent of oils used as lubricants are not consumed in use. The portion remaining, *i.e.*, the used oil, is available for recycling or disposal, and the regulatory program should address the characteristics of this portion. The breakdown between industrial and automotive lubricants in a particular nation varies with the kind and extent of its industrialization and with its automotive population. However, used automotive oils average about 60 percent of the total, and can be treated as a single category. Industrial lubricants, on the other hand, involve a number of different types and uses; these include metal-working oils, hydraulic oils, gearbox oils, spindle oils, electrical oils and process oils used in tanning and in the manufacture of rubber and textiles.

Although the composition of used industrial lubricants depends on their use and degree of segregation from contaminants or other wastes, they are generally less dispersed than automotive oils and therefore more readily available either for reuse in-plant as lower grade lubricants or for collection and recycling. The technical processes for preparing used industrial oils for recycling vary with the type of oil, but two types present special problems. These are: (1) emulsions, *i.e.*, stable suspensions of about five percent oil in water, which serve to lubricate, cool, and cleanse in such metal-working operations as milling, drilling, rolling, and drawing; and (2) oily liquids, similar to emulsions but less stable and often higher in oil content, which result when oil tanks are washed with water. Recovering the oil from emulsions and washwater involves "breaking" the suspension through use of chemicals and in some instances heat. The few facilities which currently exist for this purpose at individual plants perform poorly. Centrally located facilities drawing from many emulsion and oily liquid generators can be more efficient and effective, but involve high transportation costs (due to

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38. The available figures vary, but for industrialized nations about 50 percent is consumed in use. See J. Hopmans, *supra note 12*, at 8 (Table 1); WASTE OIL STUDY, *supra note 3*, at 4.

39. J. Hopmans, *supra note 12*, at 12 (Table 3); WASTE OIL STUDY, *supra note 3*, at 11 (Table 5).

40. Electrical oils include turbine oils and transformer insulating oils. The latter contain polychlorinated biphenyls (PCB) and trichlorobenzene; these are persistent toxic chemicals which require special disposal. See text accompanying notes 13-16 *supra*.

41. For a brief summary of methods of recycling used industrial lubricants, see WASTE OIL STUDY, *supra note 3*, at 18-20.

42. J. Hopmans, *supra note 12*, refers to recycling of emulsions and disposal of rerefining byproducts, see text accompanying note 46 *infra*, as "the Achilles heel of the spent oil problem." Id. at 14. Another problem is that these industrial oils are often not segregated from other wastes, many of which are hazardous or toxic.
non-oil bulk) and other service costs which individual waste oil generators find prohibitive. As a result, emulsions and oil wash waters usually are discarded as wastewater.43

Virtually all automotive oils are technically recyclable but the feasibility and desirability of recycling is limited by economic barriers and by environmental hazards involved in recycling. Two important economic barriers to recycling used automotive oils are the fact that the oils are widely dispersed44 (since small quantities are used in each motor vehicle) and that they frequently are not segregated from other wastes. Their wide dispersion makes them expensive to collect, while their lack of segregation means that, in addition to chemical additives mixed with automotive lubricants at the time of manufacture, they contain other foreign matter which is also expensive to remove. An important part of any legislative scheme to encourage recycling of used automotive oil thus will be the methods used to encourage aggregation of small quantities of oil and to discourage mixing with other wastes.

The environmental hazards depend on the method of recycling used. The standard rerefining process,45 whereby used oil is rendered fit for reuse as a lubricant, produces a byproduct—acid sludge—which cannot safely be disposed of except in landfills suitable for hazardous wastes, and then only after neutralization of the acid content. Hazardous waste disposal sites are scarce, however, and neutralization is expensive.46 Some variations of the

43. Id. at 13-15 & app. VII.
44. Dispersion is increasing as more oil is sold to individuals by retail stores for “do-it-yourself” oil changes. See text accompanying notes 216-217 infra.
45. For used automotive lubricants as a category there is a standard rerefining process. First the sediment in the dirty oil is allowed to settle; then the oil is decanted and heated under pressure to evaporate the water and volatile components. The oil is then treated with sulfuric acid, which precipitates the impurities. The acid sludge is drained off and the oil is then steamed, mixed with decoloring clay, and filtered. The resulting “base stock” oil may then be blended with virgin oil and whatever additives are needed to bring it to the desired lubricant specifications. One variation is to substitute centrifuging and vacuum distillation for the acid treatment stage; instead of acid sludge, this method results in a high-ash fuel byproduct. Another variation is to introduce propane into the oil before the acid treatment stage; the oil dissolves in the propane, the solution is extracted from the impurities, and the oil is then separated from the propane. The oil is then subjected to the acid and clay treatment stages using only about half as much acid and clay. Variations are being developed which would treat vacuum-distilled oil with hydrogen (instead of clay), producing a byproduct sufficiently high in lead content to be useful in lead smelting. See generally WASTE OIL STUDY, supra note 3, at 35-44; J. Hopmans, supra note 12, at 16 & app. VIII; S. Maltezou, supra note 7, at 37-40.
46. J. Hopmans, supra note 12, at 23-24, discusses research under way to help solve the problem of acid sludge disposal. The Environmental Protection Agency concluded that “[l]andfilling of acid sludge . . . appears to be a reasonable method of disposal, provided sufficient safeguards are used to protect personnel, groundwater, and nearby streams.” WASTE OIL STUDY, supra note 3, at 44. EPA’s Division of Hazardous Waste Management has recently published a report which attempts to qualify and quantify the potentially hazardous wastes generated by the rerefining industry, surveys the characteristics of the industry and the treatment and disposal technology and costs for its wastes, and projects levels of production of rerefining oil and generation of wastes for 1977 and 1983. See ASSESSMENT OF HAZARDOUS WASTE MANAGEMENT, supra note 25.
standard process avoid the acid sludge problem, and should be encouraged. Reprocessing, an entirely different process which produces oil used primarily as a fuel supplement, presents a different hazard. Since metallic and chemical impurities remain in the reprocessed oil, burning can result in the release of toxic air pollutants unless adequate control measures are implemented. A program to encourage recycling thus should address hazards associated both with comparatively unsafe methods, such as road oiling, and with safer rerefining and reprocessing methods.

The amount of oil recycled and the method of recycling that predominates are also affected by the price of virgin oil and the relative prices of various petroleum products. For example, after prices of virgin oil products rose following the 1973-74 oil embargo, efforts to collect and recycle used oil increased significantly. Used oil products became more valuable as substitutes for virgin oil, and it became worthwhile for collectors to transport used oil over longer distances and even to pay for it. (Previously, most sources of used oil paid collectors to take it.) At the same time, as prices for fuel oil had increased more sharply than for lubricating oil, a shift from rerefining to reprocessing occurred. Fuel oil dealers could offer collectors more for their used oil than could rerefiners, with the consequence that some rerefiners (whose competitive position vis-à-vis fuel oil dealers was already shaky due to high processing costs) began converting their plants in order to reprocess more used oil for sale as fuel.

B. Legislative Definitions of Used Oil

Because there are many kinds of used oil, each of which presents different hazards and different problems of collection and recycling, the legislative definition of used oil is a critical part of any program to control use and disposal. Not only may an underinclusive definition omit types of

47. See note 45 supra.
48. Reprocessing involves the comparatively inexpensive treatment of used oil by settling, heating, or filtering to remove water, volatiles, and sediment. See S. Maltezou, supra note 7, at 38.
49. Id.
50. Id. at 20-29. See also text accompanying notes 10-12 supra.
51. See text accompanying notes 13-16 supra.
53. Some rerefiners have sought to assure themselves of a continuous supply of used oil (necessary to conducting operations as close to full capacity and efficiency as possible) by purchasing their own collection trucks and installing their own collection tanks, rather than relying on independent collectors. But competition is intense and sometimes unscrupulous. Thefts from collection tanks are not unknown, and occasionally the thieves attempt to sell stolen oil to the very rerefiner whose tanks they have raided. See S. Maltezou, supra note 7, at 78-79, 85.
oil that pose special environmental or health hazards, but an overinclusive
definition may impose heavy economic and technological burdens on the
private sector. Further, since changing economic and technological condi-
tions may alter the feasibility of recycling a particular type of oil, it may be
desirable to grant discretion to administrators (through a broad definition) to
alter the coverage of the program, even though this may entail larger
administrative burdens. Thus, through manipulation of a statutory definition
of "used oil," the legislature can extend or restrict the coverage of the
program to correspond to areas of particular environmental vulnerability, to
the legislature's assessment of the need for comprehensive legislation, or to
the jurisdiction's need to concentrate attention due to limited administrative
resources.

The following examples indicate the range of definitions of used oil
that has emerged from the give and take of legislative drafting:

(1) used mineral oils and used liquid mineral oil products as well as
mineral oil-containing wastes from storage, business and transporta-
tion receptacles;54
(2) used engine, machine, cooling and similar waste oil;55
(3) any oil which has been refined from crude oil, has been used,
and as a result of such use has been contaminated by physical
or chemical impurities;56
(4) any semi-liquid or liquid used product totally or partially con-
sisting of mineral or synthetic oil, including the oily residues
from tanks, oil-water mixtures and emulsions;57
(5) a petroleum-based oil which through use, storage or handling
has become unsuitable for its original purpose due to the pres-
ence of impurities or loss of original properties.58

This selection of definitions illustrates some of the basic choices in
determining the scope of a program. Numbers (1), (3), and (5) specify a
petroleum-based oil, thus excluding animal and vegetable oils; number (4)
specifically includes synthetic oil. Numbers (1) and (4) include products
derived from oil but specify that they must be liquid, thus excluding grease,
asphalt, and other non-liquid products. Numbers (1) through (4) specify
"used" oils, thus excluding refinery wastes. Number (4) includes emul-
sions; numbers (1), (4), and (5) include storage and transportation oil-

55. Federal Water Pollution Control Act Amendments of 1972, § 104(m)(1)(A), 33 U.S.C.
(1975) [hereinafter cited as EC Directive].
58. W. Irwin, A Model Used Oil Recycling Act, § 2(a) (1976). See note 178 infra for
publication information on the Model Act, and text accompanying notes 206-225 for detailed
discussion of its provisions.
containing wastes (but, for numbers (1) and (4), only if such oil has been used). This Article is not limited to any one of these definitions, although number (4) most closely defines its scope.

Of course, altering the definition of used oil to reflect existing or desired conditions is only the beginning. Legislatures have a variety of means at their disposal to alter the economics of collection and recycling, to discourage improper uses or methods of disposing of used oil, and to otherwise induce public and private cooperation in the effort to mitigate the waste and hazards that accompany many current practices. The appropriate measures must be determined separately for each nation or state. The remainder of this Article presents examples of legislative schemes indicating the variety of regulatory alternatives available to states contemplating entry into the field of used oil legislation.

III

ALTERNATIVE MEANS FOR ACHIEVING USED OIL RECYCLING POLICY GOALS

Over the years, several nations have instituted programs to promote used oil recycling. Their reasons for doing so have varied, depending on circumstances existing in each individual nation. Particularly since the 1974 oil embargo, nations that consume more oil than they produce have sought greater self-sufficiency. These nations have viewed used oil recycling as a way to reduce oil imports and minimize balance of payments deficits. Some nations also wish to encourage recycling in order to protect jobs and capital investments in the rerefining industry. Further, they support the rerefining industry because rerefineries can produce certain products more readily or more cheaply than major refineries. Finally, prevention of the hazards resulting from water, soil, and air pollution caused by improper disposal has become an increasingly important objective.


60. Walter & Maltezou, Resource Recovery and U.S. International Trade: The Case of Waste Oil, 3 ENV'TL AFFAIRS 433 (1974). A report by Britain's Waste Management Advisory Council concludes that recovery of the approximately 65,000 tons of high quality used oil generated but uncollected each year would result in an improvement in the balance of payments of £1.7-£2.2 million. WASTE MANAGEMENT ADVISORY COUNCIL, AN ECONOMIC CASE STUDY OF WASTE OIL, WMAC PAPER No. 3, at 3 (1976). The report adds:

This estimate is tentative because of the difficulty of assessing what categories of crude or refined oil imports will be substituted at the margin when more waste oil is recovered, and because the estimate takes no account of indirect balance of payments effects such as the import content of extra resources employed in the re-refining process. Id.

61. W. IRWIN & R. Liroff, supra note 13, at 84-85. For a study comparing the energy consumption in rerefining and in burning used oil for energy recovery, see P. Cukor & T. Hall,
This section begins with a description of several European programs designed to encourage or compel proper disposal or recycling of used oil. The European experience furnishes useful insights into how a recycling program could be implemented in the United States. The discussion then analyzes United States policy concerning used oil, beginning with the history of policies that have discouraged recycling and then turning to consideration of the Model Used Oil Recycling Act, the response by state legislatures to the Model Act, and the Model Act's relation to more recent federal legislation to control disposal of hazardous wastes.

A. Used Oil Disposal Legislation in Europe

Prior to 1975, several European nations had taken steps to promote collection and reuse of used oil because of their particular vulnerability to oil shortages, their low capacity to absorb adverse environmental effects of improper disposal, and the high prices of oil products in Europe. Their programs ranged from relatively simple tax incentives to encourage recycling to more complicated and mandatory collection, reuse, and disposal statutes. The most comprehensive of these programs, the West German Waste Oil Law, became the model for a Directive adopted by the Council of the European Communities (EC) requiring all of its member nations to implement used oil recycling and disposal programs. This Directive has resulted in a number of proposals in EC member nations which are now just beginning to be implemented.

1. European Approaches Developed Prior to 1975

a. Italy and France: Tax incentives for recycling

Tax incentives to encourage recycling of used oil are in effect in both Italy and France. Italy exempts products made from used oil from 75 percent of the tax levied on crude oil products. If a company authorized to rerefin its own oil meets certain standards for the product, the remaining 25 percent of the tax is also waived. Similarly, France does not impose an oil excise tax on products made from used oil, although this practice is based on a principle of French tax law, non bis in idem (a product once taxed may not

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62. See note 178 and text accompanying notes 206-225 infra.
64. W. IRWIN & R. LIROFF, supra note 13, at 134.
65. See id. at 131 for a discussion of French tax policy with respect to used oil.
be taxed again), rather than on a policy of promoting used oil recycling. The effect is the same in both nations—the indirect subsidy enables recyclers to sell their products at prices lower than for those comparable products which are produced by crude oil refineries. These tax incentive programs do nothing to ensure that improper disposal methods are curtailed for oil which is not recycled into new products.

b. Denmark: Collection by local governments

In Denmark, all persons have an obligation not to cause pollution by improperly storing, transporting, or disposing of used oil. In order to make possible the fulfillment of this obligation, local governments are required to establish used oil collection facilities. Persons other than businesses which generate more than 300 liters per year may, for no charge, deposit their oil at the municipal collection facilities. A business which generates more than 300 liters must inform the municipal council of the kinds and amounts produced and must deposit the oil at the municipal facility unless the business can demonstrate that it is taking proper steps for safe storage, transportation, and disposal. If the business is required to deposit its oil at the municipal facility, it is charged a fee based on rates calculated to cover the cost of operating the facility.

The Danish system is designed to facilitate collection and recycling of used oil by means of a locally administered program, and should be contrasted with the federally administered German program discussed in the next section of this Article. In addition, unlike the French and Italian...
programs, the Danish program potentially could eliminate the adverse ecological and health effects of improper disposal, because it imposes direct controls on the final disposition of used oil.

c. Federal Republic of Germany: Nationally coordinated recycling and disposal

The Federal Republic of Germany, after encouraging rerefining by tax preferences and subsidies for twenty years, enacted a comprehensive, self-supporting national system in 1968. The German law both encourages recycling and ensures that unrecycled oil is properly disposed of, through a system of reporting requirements and program-funded, nationally coordinated collection and disposal contracts. All persons who import or produce certain lubricating oils (including rerefiners) pay, in addition to an existing tax on mineral oils, a compensation fee of 9.00 DM (about $3.60) per 100 kilograms of product. This money goes into a special fund reserved for the support of the disposal of used oils by controlled burning or recycling, the two methods deemed safe from environmental and public health viewpoints. The fund also supports the program-related administrative expenses of the Federal Office for Trade and Industry.

Recycling and burning enterprises under contract with the Federal Office for Trade and Industry are entitled to be reimbursed for the costs of collection, transportation, and disposal, to the extent that these costs are not covered by selling the rerefined products. Reimbursement is limited by standard rates presently set at 10.00 DM for each 100 kilograms of used oil rerefinited into lubricants, 10.00 DM for oil products other than lubricants, and 10.00 DM for each 100 kilograms incinerated. The standard rates can

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75. Law Concerning Measures to Assure the Disposal of Waste Oil, § 4(2), [1968] BGBl I 1419. The fee was raised to 9.00 DM from 7.50 DM by Article 1(2) of the Law of May 4, 1976, to Amend the Used Oil Law. Article 1(1) of the latter law authorizes the Federal Office for Trade and Industry, the agency which administers the reserve fund, to draw up to 5,000,000 DM of credit in order to avoid any cash shortages in the fund.


77. Id. § 1(2).

78. Id. §§ 2(1), (2).

79. 5 Änderung der Richtlinien über die Gewährung von Zuschüssen nach dem Altölgesetz vom 18 December 1975, [1976] Bundesanzeiger No. 52, at 1. The Federal Minister for Economic Affairs is authorized to set standard rates under section 2 of the Law. Law Concerning Measures to Assure the Disposal of Waste Oil, §§ 2(2)-(3). The rates, originally set at 12.00 DM for rerefined and lubricating oil uses, Guidelines Concerning Granting of Continual Payments in Accordance with the Used Oil Statute, art. IV, [1969] Bundesanzeiger No. 22, at 1, have decreased as costs in the industry not covered by sales have decreased.
be varied to correspond to economic conditions in the industry.  

It is assumed that rerefining yields 70 percent of the used oil by weight, so the rerefiners' monthly payments are made on the basis of the weight of each month's rerefined products. Enterprises which incinerate are paid on the basis of the actual weight of the oil in substances they burn. The Federal Office's lab analyzes the contents of continuous drip sampling devices on a monthly basis, and each month's payments are based on the percentage of the sample which is oil, multiplied by the total weight of the substances burned in that month.

The disposal firms' contracts obligate them to: (1) pick up all amounts of used oils over 200 liters in the district assigned to them; (2) do so at no charge to the user unless the oils contain more than 10 percent foreign matter; (3) provide suitable containers for lesser amounts so they can be collected later; (4) keep records of their costs, making their books and other relevant information available to the Federal Office or to appointed auditors; (5) file their applications for payments monthly; (6) install equipment specified by the Federal Office for purposes of checking their output (the sampling devices mentioned above); (7) give notice of any rerefined products shipped to other member nations of the European Community and return any payments received for producing these products (this requirement is necessary to avoid favoring German rerefiners in violation of the Treaty of Rome); and (8) give receipts for used oils collected.

81. Regulation to Implement the Used Oil Statute, § 3(1), [1969] BGBI I 89.
82. Id. § 3(2).
83. See parts 5(1), 7(2)-(3) of the sample contract reprinted in W. IRWIN & R. LIROFF, supra note 13, at 238.
85. The law limits the permissible portion of foreign substances to 15 percent. Id. § 3(3). By regulation this percentage has been limited even further to 10 percent. Regulation to Implement the Used Oil Statute, § 4, [1969] BGBI I 89; Eder, supra note 74, at 221.
86. Law Concerning Measures to Assure Disposal of Waste Oil, § 3(1)2, [1968] BGBI I 1419.
87. Id. § 6(1).
88. Id. §§ 7(1), (3).
89. Guidelines Concerning Granting of Continual Payments in Accordance with the Used Oil Statute, art. 3(1), [1969] Bundesanzeiger No. 22, at 1.
90. See part 7(2) of the sample contract reprinted in W. IRWIN & R. LIROFF, supra note 13, at 236.
92. Article 92 of the Treaty of Rome proscribes subsidies whose effect is to hinder competition among the member nations:

[...]
which contain more than 10 percent foreign matter.  

Those who generate or pick up more than 500 liters of used oils containing more than 10 percent foreign matter (which is not picked up for no charge) must also keep records on the type, amount, and disposal of the oil, so that the chain of disposal can be traced from a source through collection to final disposition. This requirement not only facilitates supervision and enforcement, but also generates information essential in determining what adjustments are needed to make recycling more effective.

The German program is designed to minimize program costs while encouraging recycling. By placing the financial burden of administrative costs and compensation payments on those using the oil, costs to the government are kept to a minimum. Further, since only lubricating oils subject to the existing mineral oil tax are also subject to the disposal fund compensation fee, the paperwork, procedures, and personnel for levying the fee are integrated almost completely with the collection of the mineral oil tax, resulting in substantial administrative cost savings. Finally, the compensation payments encourage collection and recycling of oils that otherwise could not be handled economically in the private sector.


In June, 1975, the Council of the European Communities adopted a directive on waste oil disposal intended to harmonize the laws of member nations in order to reduce "unequal conditions of competition" and to achieve "one of the aims of the Community in the sphere of protection of the environment." Since not all member nations have responded to the Directive, and since the adequacy of compliance by those which have responded is uncertain, it remains to be seen how effective the Directive will be in achieving these goals. Nevertheless, the EC action is a significant move toward international cooperation to reduce the environmental costs and resource losses which accompany improper disposal of used oil.

93. This requirement is imposed by Notice Concerning the Establishment of Mandatory Pickup Districts and Attached Price Lists in Accordance with the Used Oil Statute, [1969] Bundesanzeiger No. 223, at 1, under authority of § 6(2) of the Law. Law Concerning Methods of Assuring Disposal of Waste Oil, § 6(2), [1968] BGBI I 1419.

94. Id. §§ 6(1), (3).

95. Id. §§ 4(2)(1), (2)(3).

96. Disposal in accordance with the law has increased in Germany by 75 percent from 1969 to 1976, from 178,000 tons to 311,000 tons. (Of these 311,000 tons in 1976, 258,000 were rerefining and 53,000 were incinerated.) Eder, supra note 74, at 228-30. See also note 155 infra. Rerefining lubricants constituted 18.4 per cent of the total market for lubricants in 1974, up from 14.5 percent in 1969. Id. at 226-28.


98. The quoted phrases are in the preamble to the EC Directive, supra note 57.

99. See text accompanying note 122 infra.

100. See text accompanying note 121 infra.
provisions of the 1975 Directive, which are patterned after several elements of the German statute, are set forth below. A subsequent section of this Article describes responses to the Directive by several of the EC member nations.  

The Directive requires the nine member nations to implement measures within two years that will ensure: (1) safe collection and disposal of used oil; (2) disposal by means of regeneration or combustion other than for destruction; and (3) prohibition of discharge into surface waters, ground water, coastal waters, and drainage systems, of deposits harmful to soil, of uncontrolled discharges of residues from processing used oil, and of processing used oil by means which cause illegal air pollution. To ensure that these prohibitions are obeyed, the member nations by 1979 must establish permit systems for undertakings that dispose of used oil and must impose permit conditions commensurate with "the state of technical development." Authorized disposers of used oil must prevent avoidable risks of water, air, or soil pollution, as must collectors. Authorities are obligated to inspect the facilities periodically for compliance.

Any person having used oil who cannot comply with these prohibitions must give his used oil to a disposer who holds a permit. Those with certain quantities of used oil containing more than a nationally specified percentage of impurities must segregate them. Those who generate, collect, or dispose of more than 500 liters of used oil a year must keep records of its quantity, quality, origin, location, and receipt. They must provide the information contained in these records to the authorities on request. Disposers also must provide information when requested about used oils and used oil processing residue disposal sites.

If safe collection, disposal, regeneration or combustion, and compliance with the prohibitions mentioned above cannot be realized without

101. See text accompanying notes 124-175 infra.
102. EC Directive, supra note 57, art. 17. No member nation has yet informed the Commission of the European Communities that it is in compliance. See text accompanying note 122 infra.
103. Id. art. 2.
104. Id. art. 3.
105. Id. art. 4(1).
106. Id. art. 4(2).
107. Id. art. 4(3).
108. Id. arts. 6, 18.
109. Id. art. 9.
110. Id. The Directive does not require that collectors be licensed. It does, however, require licensing of those who wish to dispose of used oil. Id. art. 6.
111. Id. art. 12.
112. Id. art. 7.
113. Id. art. 8.
114. Id. art. 10.
115. Id.
116. Id. art. 11.
government intervention, the member nations are to take steps necessary to ensure collection and disposal, perhaps by assigning enterprises to certain zones.\textsuperscript{117} The unrecovered costs of rendering this service, plus a reasonable profit, may be paid to the enterprises as indemnities.\textsuperscript{118} The indemnities must be financed in accordance with the "polluter pays principle," perhaps by charges imposed on used oil, on newly refined oil, or on products which when put in service generate used oil.\textsuperscript{119}

The effectiveness of the Directive in reducing competitive inequities among EC members and in preventing environmental damage caused by indiscriminate disposal of used oil will depend on how it is implemented by member nations. Since the incentive for private industry in member nations to recycle and properly dispose of oil will be the Directive's indemnity requirement, an important question is what constitutes compliance with the indemnity provision. Although the Directive requires the financing of indemnities in accordance with the "polluter pays principle," the amount of the indemnities must "not cause any significant distortion of competition or . . . give rise to artificial patterns of trade in the products."\textsuperscript{120} Neither phrase is self-explanatory and both would require investigation beyond the representations of member nations to determine the degree of compliance.\textsuperscript{121} Another problem is that as of June 16, 1977, the deadline for compliance, no member nation had informed the Commission that it had implemented the measures necessary to comply with the Directive.\textsuperscript{122} Thus the long term effectiveness of the Directive remains to be seen.

3. Response of Member Nations to the EC Directive

Although not all member nations have fully developed their plans for implementing the EC Directive, an examination of their proposed legislation in response to the Directive is useful. The only nation which has enacted new legislation after the issuance of the 1975 Directive is The Netherlands. Both the Dutch statute and recently proposed legislation in France and Italy tend to follow the basic pattern set out in the Directive, with variations among the individual nations. England, on the other hand, has done no more than issue an advisory pamphlet recommending local programs to control disposal and reuse of used oil. In the Federal Republic of Germany, several amendments to the 1968 law have been proposed. These amendments,

\textsuperscript{117} Id. art. 5.
\textsuperscript{118} Id. art. 13.
\textsuperscript{119} Id. art. 14.
\textsuperscript{120} Id. art. 13.
\textsuperscript{121} Id. art. 13.
\textsuperscript{122} Id. art. 17.

The Directive offers further guidance on the financing and amounts of the indemnities: "The indemnities may be financed . . . by a charge imposed on products which after use are transformed into waste oils or on waste oils." \textsuperscript{Id. art. 14.} The indemnities "must not exceed annual uncovered costs actually recorded by the undertaking taking into account a reasonable profit." \textsuperscript{Id. art. 13.}

The two year deadline and obligation to inform the Commission of compliance are imposed by article 17 of the Directive. \textsuperscript{Id. art. 17.}
designed to correct problems found in the original law, are especially interesting because the EC Directive was modeled after the German law.

a. The Netherlands' Law on Chemical Waste

The Netherlands in February, 1976, enacted a law concerning chemical wastes with provisions applicable to used oil which closely parallel the EC Directive.\(^{123}\) Under the Law, the transfer of used oils to persons not licensed either to collect them or to "store, treat, process or destroy" them is prohibited.\(^{124}\) Both the transferor and the transferee must notify the Minister of Health and Environmental Hygiene of the names and addresses of parties involved; the date, nature and amount of oils transferred; and the place and means of delivery involved in each transaction.\(^{125}\) The country will be divided into approximately 15 designated zones\(^{126}\) and a licensed collector will be restricted to one zone.\(^{127}\)

The law is designed to harmonize supply and demand of used oils on a national basis. Each licensed collector must provide free collection services to anyone within his zone who has oil in quantities above a certain minimum. (However, a license may specifically authorize charging for collection in accordance with specified rates.)\(^{128}\) The zones may overlap to encourage competition for used oil among collectors, whose profit comes from sale of used oil to recyclers and disposers.\(^{129}\) The government plans to limit the number of licensed recyclers and disposers so that no more recyclers or disposers will be licensed than are needed to handle the amounts collected.\(^{130}\) The collector's license may designate delivery to a specific recycler or disposer in order to assure the recycler a sufficient supply.\(^{131}\) Similarly, a recycler's license will designate the zones or collectors from which he must accept used oil.\(^{132}\)

The law provides for reasonable government indemnities to a licensee who must bear unreasonable costs or losses for which he would not other-

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\(^{125}\) Id. arts. 18-19.

\(^{126}\) W. IRWIN & R. LIROFF, supra note 13, at 127.

\(^{127}\) Id.


\(^{129}\) W. IRWIN & R. LIROFF, supra note 13, at 127. As of the spring of 1977, implementation of the system awaited a report from a working group established to propose the zones and their licensed collectors. Since there were more existing collectors than potential zones, some of whom collected across the entire country, the working group discussions reportedly had taken place for over a year "with the knives on the table" and would perhaps not be able to reach agreement. Meanwhile, several municipalities have set up collection facilities. Interview with F. van Veen, Stichting Verwijdering Afvalstoffen, in Washington, D.C., May 11, 1977.

\(^{130}\) W. IRWIN & R. LIROFF, supra note 13, at 127.


\(^{132}\) Id. art. 23, para. 2.
wise be compensated as a result of a decision by the government to condition or withdraw a license. These indemnities and other costs entailed in the implementation of measures adopted in the interest of effective disposal of used oil will be financed by an "oil penny" levied on persons who import, manufacture, use, sell, or deliver lubricating and insulating oils, based on the quantity and nature of oils involved.

A Used Oil Policy Advisory Committee, consisting of not more than eleven members who produce, sell, use, or dispose of these oils, will assist the Minister in implementing this law. The Committee would presumably be useful in advising the Minister on the use of his authority to make exemptions from the general prohibition on depositing used oil in or on the soil (whether or not in containers) if that proves necessary in the interest of effective disposal of used oil and if exemptions are not in conflict with the protection of the environment.

The initial preference in implementing this statute was for used oil to be reprocessed for use as a fuel. As of early 1977, the government of The Netherlands had not announced whether it would modify this policy to allow indemnities to support the extra costs of rerefining for use as a lubricant as well.

b. Italy and France: Preliminary steps toward collection programs

Both Italy and France reportedly have tentative plans to institute programs for the collection and reuse or disposal of used oil. The proposals

133. Id. art. 36.
134. Id. art. 37, paras. 1(e), 2(c).
135. Id. art. 30, para. 2.
136. The author wishes to emphasize that the material in this section is designed solely to give examples of possible schemes for the control of used oil disposal and recycling, and is not declarative of existing law either in Italy or in France. The information concerning the Italian proposal, except where otherwise noted, was obtained by the author from a confidential source in Italy, and is not the official position of the Italian government. The information concerning the French proposal can be found in Brassart, supra note 66, at 238-42, and in Proces Verbal de la Reunion tenue le 9 Novembre 1976 par la Commission Europeenne de Regeneration, at 2-4.
in both nations contemplate the establishment of interministerial government committees having some non-government members to administer the program. These committees would have the authority to establish exclusive collection zones, to contract with private and public collectors for a term of years in each zone, and to limit reuse or disposal to persons having licenses to do so.

In order to facilitate collection, Italy's proposed legislation would require generators of used oil to segregate their oil according to the nature of its original use. In addition, both nations will permit licensed collectors to subcontract limited percentages of their work to unlicensed firms, although the exclusive contract in each zone will be granted only to a licensed collector.

Methods of determining who may use the collected oil and for what purposes differ in the two countries. In Italy, those who wish to rerefine used oil or burn it as fuel will be required to have a license to do so. Licensees would be assigned exclusive zones and each licensee would be entitled to receive all oil collected in his zone, and none from any other zone. The proposed legislation would permit licensees to transport used oil out of the geographic zones to which they are assigned, but only for a limited period of time. Ultimately the licensed user will be required to locate his plant within his assigned zone, presumably to reduce the costs and risks of transportation. Licensed collectors would be permitted to dispose of unrecyclable oil by incineration.

In France, distribution of collected oil would be the responsibility of a national company (to be funded jointly by the government, rerefiners, and the petroleum industry) authorized by the Ministry of Industry to sell and transport used oil. Sale prices and transportation charges would be controlled by the government. Sales will be allowed only to those authorized by the interministerial committee to rerefine, burn as fuel, or incinerate used oil. Rerefiners would receive allocations of used oil in quantities to be determined annually by the committee, and would be permitted to bid for surplus quantities. As in Italy, only licensed persons will be allowed to heat with used oil or incinerate non-recyclable oil. The French legislation expressly would prohibit persons not licensed to burn used oil for disposal or as fuel from burning any oil generated in their own businesses.

The stances taken by the two governments differ with respect to a preference for rerefining. The French proposal seems designed to encourage rerefining of used oil, although it also permits burning as a fuel. The system for allocating collected oil to rerefiners probably will ensure supplies to keep rerefineries operating at capacity, if enough oil is available. The Italian government, on the other hand, reads Article 3 of the EC Directive as not

(on file with author). The French proposal, like the Italian, is extremely preliminary and subject to change.
requiring a preference for rerefining. Consequently, the Italian proposal presently does not prefer rerefining, although the government's recent announcement of plans to build its own rerefinery may indicate a shift in this policy.

c. **England: A non-compulsory approach to used oil recovery**

In July, 1976, England's Department of the Environment issued its Code of Practice for Mineral Oil Wastes. The Code is merely advisory and is intended for adaptation to local circumstances. It recommends that "the economics of collection could be improved by the provision of reception points at Civic Amenity Sites and of joint storage facilities, for example, on industrial trading estates." The Code also recommends cooperation between government waste disposal agencies, used oil generators, and used oil recovery firms to enhance "the efficiency of oil recovery operations."

In addition to encouraging collection, the Code discourages the burning of used oils in small burners. It states that: "Waste of lower oil content may also be burned as supplementary fuel in suitably equipped installations. In the combustion of the waste, account should be taken of any contaminants present which could give rise to objectionable emissions and possible health hazards . . . ." The Code notes that "specifically, spent motor oils contain lead, a dangerous cumulative poison, and the control of emissions from combustion of spent motor oils requires careful consideration . . . ."

The Code of Practice does not approach the comprehensiveness of the other EC member nations' programs that were discussed above. The Department of the Environment nevertheless feels that the Code adequately responds to the requirements of the EC Directive:

The advice given in the [Code of Practice] accords with the approach established in the [EC] Council Directive . . . . Compliance with the requirements of the Directive will be achieved largely by the implementation of Part I of the Control of Pollution Act, in particular regulations will be made as necessary under Section 17 [of the Act].

138. Proces Verbal, supra note 137, at 3.
139. Id.
141. Id., Code of Practice, § 5.7.3.
142. Id. § 5.7.4.
143. Id. § 5.7.
144. Id. § 3.1.9.
145. Id., Foreword, at i (emphasis added).
Section 17 of the Control of Pollution Act\textsuperscript{146} obligates the Secretary of State for the Environment to promulgate regulations for the disposal of any waste he regards as particularly dangerous or intractable.\textsuperscript{147} The Department thus has an existing statutory basis to control disposal of used oil, although it has yet to designate mineral oils as particularly dangerous or intractable.

The British approach leaves the collection aspect of waste oil recovery to be implemented by local or private agencies.\textsuperscript{148} Although compliance with the safe disposal and record-keeping requirements of the EC Directive may be achieved under Section 17 of the Control of Pollution Act, the Code of Practice underplays the need to reuse or rerefine the oil.\textsuperscript{149} Since the Directive apparently permits EC member nations to begin with non-compulsory programs for collection and reuse so long as hazardous disposal methods are curtailed,\textsuperscript{150} the Department of the Environment’s action probably is responsive to the EC Directive’s minimum requirements. It remains to be seen whether the program will be successful enough to avoid the need for further government intervention, as is required by the Directive in the event other measures prove inadequate.

d. Federal Republic of Germany

After several years of experience with the Used Oil Law, German policymakers have found it necessary to make several changes in the used oil program. These changes are in response to perceived inadequacies in the accounting and record-keeping requirements of the law and in the level of government supervision of collection, recycling, and disposal operations. Further, the economics of collection and recycling operations have changed over time, and have led to a need for greater administrative flexibility than is

\textsuperscript{146} Control of Pollution Act of 1974, c. 40. Part I of the Act, id. §§ 1-30, deals with disposal of hazardous wastes on land.

\textsuperscript{147} Id. § 17.

\textsuperscript{148} A report on a case study of the economic prospects for increased recovery of used oil in England, issued by the Waste Management Advisory Council in December, 1976, concludes:

There are several imperfections that exist in the current market situation preventing the recovery of . . . 65,000 [tons per year of reasonably high quality used oil currently unrecovered]. These relate to:

i. The small nature of individual arisings and the lack of information about the best means of disposal for Do-It-Yourself motorists; and

ii. The problems of contamination of industrial waste oil arisings by other wastes which present technical and economical barriers to recovery.

\textsuperscript{149} Indeed, the drafters of the Code state:

[T]he recycling of waste oils into virgin oils for refinery feedstock is not generally favoured for techno-economic reasons.

\textsuperscript{150} See text accompanying notes 103-117 supra.

\textsuperscript{148} Waste Management Advisory Council, supra note 60, at 3. The report suggests that providing and publicizing collection centers would solve the first problem (and reduce illegal disposal of small amounts of industrial used oils) and that following the advice in the Technical Memorandum will alleviate the second. In addition, a handbook will be forthcoming in early 1977 to “help voluntary organizations and local authorities . . . decide whether they can provide collection facilities and sell the oil they recover through the trade.” Id.
provided in the 1968 Law for assigning and modifying mandatory collection districts. In addition, as changes in laws governing other wastes have been made, corresponding adjustments in the used oil program have become necessary to ensure that used oil does not become a vehicle for improper disposal of other closely regulated wastes. The Ministry of Economics has therefore proposed a number of amendments to the original law151 which are now being considered by the Cabinet.152

The Ministry first proposes that it be given authority to modify the size and boundaries of mandatory collection districts established in existing contracts with used oil collectors.153 This increased authority is needed to respond to two problems under the existing statute. First, Ministry audits show that collection and transportation costs are lowest for enterprises which collect within a radius of 100 kilometers.154 Since many firms' contractually fixed collection districts are larger than this, their uncovered costs tend to be high, resulting in a higher level of compensation payments from the fund than the Ministry feels is justified. Further, since the Used Oil Law became effective in 1969 the number of rerefining firms has declined from 19 to 10 while the number of incinerating firms has increased from 10 to 15.155 This shift in the pattern of contracting firms with their own facilities for disposal or recycling is a further reason for the Ministry's request for authority to redraw the districts.156

To facilitate the redistricting process, the Ministry needs better data on the costs, receipts, and profits of used oil firms than is available under current accounting and reporting requirements. The firms have not made available to federal accountants all of their profit and loss figures, particularly those concerning collection costs, which the Ministry argues are inflated because some firms travel too far outside their districts, forego fees to which they are entitled for collection of oil containing more than 10 percent contaminants, and make extralegal payments to those having uncontaminated used oil.157 Consequently, the Ministry proposes that the firms be required to make detailed information available on demand concerning costs, receipts, and profits.158

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151. Ministry of Economics, Draft of a Second Law to Amend the Used Oil Law (June 15, 1977) [hereinafter cited as Proposed Amendments]. This is the most recent of several drafts produced by the Ministry of Economics during the last two years.

152. Background concerning the Ministry's views discussed in this section was obtained in interviews with Ministerialrat F. Kruse of Referat III D 5 of the Ministry of Economics during March and November, 1976.


154. Ministry of Economics, Begriindung to the Draft of a Second Law to Amend the Used Oil Law 7 (June 15, 1977) [hereinafter cited as Begriindung].

155. Id. at 8. Incinerating firms' share of used oil disposal is currently only 13 percent. Id. at 5. Most oil is apparently burned for energy, e.g., for the generation of electricity, process steam, or heat. See also note 96 supra.

156. Id. at 8.

157. Id. at 9.

158. Proposed Amendments, supra note 151, art. 1, no. 1(a)(1)(b).
The Ministry also proposes that collection of used oil be restricted to recycling firms with contractually fixed mandatory collection districts or to collectors under contract with such firms. In order to prevent used oil from escaping the regulatory system, collectors under contract would be required to deliver their oil to such firms. Independent collectors, i.e., those without their own recycling facilities, would be entitled to operate only if their services were contracted for by the government. Such contracts would require each collector to allow government accounting of collection and transportation costs, and to keep records on the source, kind, amount, storage, and disposal of collected oil.

In the summer of 1976, Germany amended its general waste disposal law to provide for regulation of wastes presenting special dangers to health and to air and water quality, including wastes which are explosive or flammable. To prevent people from circumventing these regulations by mixing especially dangerous wastes with used oil destined for collection in accordance with the Used Oil Law, the Ministry of Economics has proposed redefining used oil so that only oils containing less than 15 percent "use-related" foreign matter would be collected without charge to the person possessing the used oil. Used oil containing foreign matter unrelated to the purpose for which the oil was used presumably would be handled in accordance with regulations governing wastes other than used oil, including, where appropriate, the regulations governing special hazardous wastes authorized under the 1976 amendments to the general waste disposal law. The Ministry's proposed amendments would also require segregation of used oil containing more than 10 percent use-related or other foreign matter from used oil containing only 10 percent or less use-related foreign matter in accordance with regulations issued by officials of individual Länder. These two amendments are required by the EC Directive. The amendment dealing with foreign matter in used oil lends urgency to the need for Ministry regulations authorized by the Used Oil Law which would prescribe means for determining proportions of foreign matter in used oil.

159. Id. art. 1, no. 1(2)(a); Begründung, supra note 154, at 12.
160. Proposed Amendments, supra note 151, art. 1, no. 2(a); Begründung, supra note 154, at 11.
161. Begründung, supra note 154, at 12.
162. Id.
163. Id.
166. Proposed Amendments, supra note 151, art. 1, no. 2(b); Begründung, supra note 154, at 12.
167. Proposed Amendments, supra note 151, art. 1, no. 2(g).
168. Id.
169. See text accompanying note 113 supra.
Three further amendments are designed to improve supervision of used oil generation, collection, and disposal. The first, designed to implement Article 10 of the EC Directive, would authorize Länder officials to require all those possessing used oil, not just commercial enterprises, to provide information about its source, kind, amount, storage, and disposal. The second would require that all commercial and public enterprises which generate or collect used oil give written notice of these activities; this will make possible administrative determinations, without independent investigation, of who should be keeping records under the Used Oil Law. The third amendment would require used oil recyclers to provide information on request about the source, kind, amount, storage, and disposal of oils they receive.

One amendment considered but not proposed by the Ministry would have required sellers of new oil to accept used oil returned by their customers. After several members of the Bundestag threatened to prohibit sale of oil products by retailers other than garages and service stations, on the ground that only such facilities were capable of proper used oil disposal, the Ministry was able to obtain agreement by the oil industry, retailers, and local governments voluntarily to provide collection facilities either at the place of sale, at service stations, or at municipally maintained collection facilities. Retailers, in addition, have agreed to inform customers of the location of collection facilities. The success of these voluntary measures has been facilitated by the efforts of the media and automobile clubs to inform the public about the problems of improper disposal and the possibility of proper disposal of self-changed oil, and has vindicated the Ministry's belief that effective used oil regulation depends on voluntary efforts taken by those directly responsible for the realization of solutions.

B. Used Oil Recycling in the United States

Until quite recently, the United States had not developed policies favoring the collection and reuse or safe disposal of used oil. This lag behind the development of such policies in Europe can be attributed to two causes. First, neither the energy conservation nor the environmental justifications for recycling seemed sufficiently important to policymakers in the United States. Second, doubt persisted concerning the quality of rerefined prod-

171. See text accompanying notes 114-115 supra.
172. Proposed Amendments, supra note 151, art. 1, no. 5(a)(1); Begründung, supra note 154, at 15.
173. Proposed Amendments, supra note 151, art. 1, no. 5(c).
174. Id. art. 1, no. 1(a)(1)(b).
175. Begründung, supra note 154, at 4.
176. For further background on German efforts to solve the "do-it-yourselfer problem," see Deutscher Bundestag, Zweiter Bericht der Bundesregierung über die Tätigkeit des Rückstellungsfonds nach dem Altelgesetz, insbesondere über die Möglichkeiten einer Ermäßigung der laufenden Zuschüsse und der Ausgleichsabgabe, Drucksache 7/3455, at 6-7 (April 9, 1975). See also W. IRWIN & R. LIROFF, supra note 13, at 90-93.
During the past few years, the need to conserve petroleum resources and a growing concern over hazards accompanying improper disposal have led to reassessment of used oil policies, culminating in the Federal Energy Administration's (FEA) sponsorship of a project to develop model legislation to be implemented at the state level. The following sections of this Article explore the development of used oil policy in the United States, set forth the provisions of the FEA-sponsored Model Used Oil Recycling Act, discuss the Model Act’s reception in state legislatures, and describe the manner in which state used oil programs would be affected by the application of the Resource Conservation and Recovery Act of 1976 to used oil.

1. Development of Federal Used Oil Policy

The policy of the federal government toward used oil has been one of benign neglect. Without directly disparaging the use of products made from recycled oil, the government through tax rulings and consumer protection regulations has placed the used oil recycling industry at a competitive disadvantage with the virgin oil industry. These actions, and recent efforts to moderate them, are outlined briefly below.

a. Federal policies that discourage recycling

Two federal actions indicating insensitivity to the need for recycling used oil occurred during the 1960s. First, an Internal Revenue Service (IRS) interpretation of lubricating oil tax credit provisions reduced recycled oil’s competitive advantage over virgin oil in the market for lubricants not used in highway vehicles. Second, federal labeling regulations requiring consumers to be informed that they are purchasing used oil products were promulgated without compensatory publicity to encourage use of used oil products where they are equivalent to virgin oil products.

The IRS ruling eliminated an advantage previously enjoyed by used oil sellers in one segment of the lubricating oil market. Under section 4091 of the Internal Revenue Code, manufacturers of lubricating oil are required to pay an excise tax of six cents for each gallon sold. Used oil re-refiners are

177. For a recent summary of used oil policy in the United States, see Maugh, Rerevined Oil: An Option that Saves Oil, Minimizes Pollution, 193 SCIENCE 1108 (1976). A comprehensive discussion of United States used oil law and policy is W. IRWIN & R. LIROFF, supra note 13, at 21-84.


179. For a summary of the complicated history of federal tax treatment of recycled oil products, see W. IRWIN & R. LIROFF, supra note 13, at 28-37.

exempt from this tax, so that lubricating oil composed solely of reclaimed used oil can be sold at prices lower than for similar quantities of virgin oil. In most cases, rerefiners blend the recycled product with virgin oil to give it desired lubrication characteristics. Since virgin oil is subject to the excise tax when manufactured, the blended oil has an after-tax cost somewhat higher than that of unblended used oil. Nevertheless, this cost is still lower than that of pure virgin oil.

In 1965, Congress enacted section 6424 of the Internal Revenue Code, which provides for a tax credit of six cents per gallon to persons who use virgin lubricating oil other than in a highway vehicle. The used oil recycling industry sought to claim this credit, on the theory that virgin oil blended into used oil is not used in a highway vehicle. The IRS denied the credit, holding that blending does not constitute a “use” within the meaning of section 6424, inasmuch as the blended product is still fit for use as a lubricant. This portion of the ruling would have been correct if the IRS had permitted non-highway users to claim the credit on the virgin portion of the blended product. Otherwise, the credit could have been claimed twice, once by the person blending the oil, and once by the final user.

However, the IRS also denied the credit to final non-highway users, on the theory that the consumer is using not new oil, but rather, “nontaxable” used oil. This portion of the ruling seems incorrect, inasmuch as part of the “nontaxable” used oil, i.e., the virgin blending stock, has in fact been taxed. As a result of this ruling, the total tax cost of virgin oil blended with used oil is higher than that of pure virgin oil—a result that seems inconsistent with the apparent purpose of section 6424 to benefit non-highway vehicular and non-vehicular users of lubricating oils. Moreover, the effect of the IRS ruling is to reduce the competitive advantage of blended used oil over virgin oil, even though the total cost (tax and non-tax) of the blended product may still be lower than that of pure virgin oil.

184. Id. The taxpayer in this case was a manufacturer of virgin oil who blended it with reclaimed used oil. The IRS noted that, while the blending activity did not make the taxpayer a “manufacturer” taxable under IRC § 4091 upon sale of the “resultant product,” when the taxpayer blended virgin oil into a nontaxable product (i.e., the used oil blend) he became liable for the § 4091 tax as if he had sold the oil. Id. at 563. In calling the “resultant product” nontaxable, the IRS failed to consider whether the inclusion of virgin oil subject to the tax had rendered it “partially taxable.” Since the reason for not permitting the ultimate user to claim the § 6424 credit was that the blended product was not taxable to its manufacturer, the ruling would also deny the credit to recyclers who have purchased virgin oil for blending from other taxable manufacturers, and to their customers.
185. See W. IRWIN & R. LIROFF, supra note 13, at 32-35, for an analysis of the legislative history of IRC § 6424.
186. A provision which would have exempted virgin oil purchased for blending with rerefined oil from the six cent excise tax was passed by the House of Representatives but not
The second federal action affecting the marketability of used oil products is a Federal Trade Commission (FTC) regulation requiring lubricating oil products made from used oil to be clearly advertised and labeled as "previously used." This regulation was promulgated in 1964 on the basis of an FTC finding that consumers prefer virgin lubricating oils, that they assume they are buying such products unless the containers are otherwise labeled, and that therefore the failure to label previously used products as such is an unfair method of competition and a deceptive trade practice. The FTC made no provision for labeling the product as appropriate for a particular use.

The FTC stated that neither the value of the recycling industry's service in providing proper disposal of used oil nor the functional equality of its products with virgin oil products was "germane" to its decision. Subsequent statements by the Chairman of the FTC, however, indicate his belief that the reliability of performance characteristics (such as durability) of rerefined motor oils is questionable because of "the unknown origin of the waste oil" and cannot be determined without performance testing. The FTC is not inclined to alter its rule until "valid, impartial scientific tests" are available to demonstrate the equivalence of rerefined and virgin oil products.

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188. 16 C.F.R. § 406.2(a).
189. Id. § 406.2(b).
190. Letter from FTC Chairman Miles Kirkpatrick to Representative Charles A. Vanik (August 19, 1971) (on file with author). Performance testing is distinct from so-called bench testing, i.e., laboratory tests of chemical and physical properties. Performance tests involve automotive engine sequence tests:

In them, oil to be tested serves as a lubricating agent in an engine that is run through a specific sequence of operations for an extended period. The engine is then disassembled and checked for wear, corrosion, and so forth. These tests can cost as much as $20,000 for one oil sample, so rerefiners have not been able to afford to demonstrate the quality of their products.

Maugh, supra note 177, at 1110.

This concern over the qualitative equivalence of rerefined oil has apparently been settled in Europe:

Formerly the question whether this recovery product could in fact be regarded as qualitatively on a par with the "new oil" made from crude in the refineries of the big
Movements toward change in federal policy

Although efforts to overturn by statute the IRS's position on blended used oil products have so far failed, other developments at the federal level may, in the long run, lead to a change in the FTC's view on labeling of used oil products. Further, some steps are presently being taken to encourage voluntary recycling and to increase governmental agencies' use of recycled oil products.

The principal force behind these developments is the Energy Policy and Conservation Act, enacted in December, 1975. The Act requires the National Bureau of Standards (NBS), "as soon as practicable," to "develop test procedures for the determination of substantial equivalency of rerefined or otherwise processed used oil or blend of oil . . . with new oil for a particular end use," and to report the procedures to the FTC. There is considerable doubt whether this assignment can result in simple, inexpensive tests, particularly since the major oil companies have been trying unsuccessfully to develop simple quality tests for decades.

If and when the NBS reports to the FTC, the FTC is required to prescribe labeling standards within 90 days which "permit any container of..."
recycled oil to bear a label indicating any particular end use for which a
determination of substantial equivalency has been made" in accordance
with test procedures the FTC adopts by rule on the basis of the NBS
report.197 Within the same period, the EPA is required to adopt standards for
labeling of all containers of oil "relating to the proper disposal of such oils
after use . . . [which] shall be designed to reduce, to the maximum extent
practicable, environmental hazards and wasteful practices associated with
the disposal of such oils after use."198 Once the FTC rules governing
labeling of recycled oil go into effect they will preempt any inconsistent
FTC rule and any inconsistent state or local law.199

In addition to the change in labeling regulations, the Energy Policy and
Conservation Act requires that affirmative steps be taken to encourage the
use of recycled oil, once the NBS and FTC take action. All federal officials
are required to "act within their authority" to revise procurement policies
"to encourage procurement of recycled oil for military and non-military
Federal uses" whenever it is available at prices competitive with new oil for
the same end use.200 Further, all federal officials are directed to educate
federal and state employees and the private sector on "the merits of recycled
oil, the need for its use in order to reduce the drain on the Nation's oil
reserves, and proper disposal of used oil to avoid waste of such oil and to
minimize environmental hazards associated with improper disposal."201

In anticipation of this public education assignment (and in response to
inquiries from congressmen in early 1975 about the FEA's policy) the FEA
has prepared a short fact sheet on used oil, has sponsored the preparation of
a handbook to guide persons wishing to organize voluntary collection and
recycling efforts at the local level,202 and has sponsored the drafting of

198. Id. § 6363(d)(2).
199. Id. § 6363(e).
200. Id. § 6363(f). Some military procurement specifications presently prohibit the pur-
chase of products containing recycled oil. E.g., Military Specification: Lubricating Oil, Internal
Combustion Engine, Tactical Service, MIL-L-2104C (Nov. 20, 1970); Military Specification:
Lubricating Oil, Internal Combustion Engine, Administrative Service, MIL-L-46152 (Nov. 20,
1970). Section 3.2 of MIL-L-2104C, for example, provides:

3.2 Materials. The engine lubricating oils shall be petroleum products, synthet-
ically prepared products or a combination of the two types of product compounded
with such functional additives (detergents, dispersants, oxidation inhibitors, corrosion
inhibitors, etc.) as are necessary to meet specified requirements. No re-refined con-
stituent materials shall be used.

202. Voluntary used oil recycling programs may be sponsored by municipalities, private
organizations, or corporations. The first step in the establishment of such a program is to obtain
the use of used oil collection facilities. Usually, service stations—most of which have under-
ground storage tanks—provide this facility. In some cases, rerefiners supply collection tanks.
The next step is to publicize the program. This is accomplished through distribution of press
releases, publicity pamphlets, posters, bumper stickers, etc. Frequently, newspaper articles in
local papers serve an important publicity function, and occasionally radio and television
advertisements are used. Finally, arrangements must be made to haul away the used oil. In most
instances, rerefiners have this responsibility. At the present time, rerefiners usually pay several
model legislation for used oil recycling programs. In addition, the FEA recently has reviewed and approved financial assistance to some states which have included such programs in their energy conservation plans under the Energy Conservation and Policy Act. Thus, while the used oil labeling problem remains, the federal government has begun to take steps calculated to change existing policies regarding used oil.

2. The Model Used Oil Recycling Act

The Model Used Oil Recycling Act provides a comprehensive scheme for the collection, recycling, and disposal of used oil. The Model Act is designed to provide state and local governments with a point of departure as they begin to develop their own used oil recycling programs. It was drafted with two objectives in mind: first, to provide adequate administrative flexibility so that used oil policy, within the terms of the Model Act, can be adapted to local circumstances, including local economic and environmental conditions; and second, to allow room for legislatures to modify the Act itself where its provisions fail to accommodate local needs.

The Act should fit easily within existing environmental regulatory schemes. Although it provides for a "Director" responsible for administering the implementation of the Act, this person could be the head either of an existing environmental protection agency or of a new agency formed to implement the used oil program.

cents per gallon of used oil collected. Many of the voluntary programs donate the money received to charitable organizations.

Although it sponsored preparation of the handbook, FEA did not publish it before becoming part of the Department of Energy in the fall of 1977. As of December, 1977, the Department of Energy had not decided whether to continue FEA's used oil program; publication of the handbook depends on this decision.

203. Model Used Oil Recycling Act, supra note 178. Although it sponsored the drafting of the Model Act, the FEA has not yet adopted it as policy.


206. The author of the present Article was the principal drafter of the Model Act. It went through several drafts as a result of the comments of reviewers who represented all possible perspectives and experience: oil refiners, rerefiners, and retailers; state and local officials involved in establishing—or attempting to establish—programs; federal agency staff members who had studied used oil issues; members of organizations serving state and local governments; and representatives of public interest organizations. See note 178 supra for information on where copies of the Model Act can be obtained.

207. For example, a local government might wish to defer to the state for the licensing of used oil collectors and recyclers. In this event, a law consisting only of §§ 1-7, 11(a), (f), 12-16, would offer the foundation for an effective program to promote used oil recycling. Other specific provisions which might be altered to match local conditions are mentioned in the text of this Article where appropriate.

208. Section 2(c) of the Model Act designates as Director any person whom the legislature, in enacting the legislation, places in that position. The Director is given time to organize implementation by § 16, which postpones the Act’s effective date for 90 days following
The essential provisions of the Model Act are set forth below, accompanied by a brief commentary explaining the reasons for using particular language or the intended effect of specific provisions. Since the Act was designed as model legislation, it includes the standard provisions governing administrative procedures, enforcement, severability, repeal of inconsistent legislation, and effective date. The more important elements of the Act, to which most discussion is devoted, include: (1) definitions of used oil and of the term "recycling"; (2) legislative findings and policy statements; (3) prohibitions on private conduct that is inconsistent with the policy of the Act; (4) provisions for a public education program and for the establishment of used oil collection facilities accessible to the general public; (5) a system of licensing and special permits for those who collect, recycle, and dispose of used oil; and (6) a provision controlling the labeling of recycled oil products and encouraging government purchase of such products.

a. Definition of "used oil"

Defining the regulated substance is a difficult aspect of used oil legislation, because there are many kinds of oil. The following definition has been included in the Model Act:

Section 2(a). "Used Oil" means a petroleum-based oil which through use, storage or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties.

The term "used oil," rather than "waste oil," was used because it connotes the possibility of further use rather than worthlessness. The definition includes most used oils but excludes foreign substances such as insoluble or partially soluble organic chemicals or petroleum derivatives requiring special handling precautions because of toxicity, composition, or flammability. Consequently, such substances as gasoline, petroleum solvents, chlorinated solvents or oils, aromatics, organic pesticides, polychlorinated biphenyl, low-boiling ketone, alcohol, and ether will not be subject to the provisions of the Model Act, except to the extent they contaminate used oil as defined in section 2.

b. Definition of "recycle"

An extensive definition of the term "recycle" is provided in the Model Act not only because the purpose of the Act is to encourage recycling of used oil, but also in order to limit recycling techniques to those which comport with other policy considerations.

Section 2(b). "Recycle" means to prepare used oil for reuse as a petroleum product by refining, rerefining, reclaiming, reprocessing enactment. Other sections not discussed in this Article include standard statutory provisions governing severability of sections within the Act (§ 14) and repeal of prior laws inconsistent with the Act (§ 15). Section 1 provides a short title for the Act.
or other means or to use used oil in a manner that substitutes for a petroleum product made from new oil, provided that the preparation is operationally safe, environmentally sound, and complies with all laws and regulations.

While the terms used to define recycling have more or less vernacular meanings, the proviso in section 2 merits further explanation. The term "operationally safe" means the preparation or use will not pose risks of fire or explosion. "Environmentally sound" means it will not endanger public health or environmental quality.

c. Legislative findings

The Model Act's proposed findings are based on the facts outlined earlier in this Article:

Section 3. The [legislature; council] finds that [millions] of gallons of used oil are generated each year in the [State; municipality]; that used oil is a valuable petroleum resource which can be recycled; and that, in spite of this potential for recycling, significant quantities of used oil are wastefully disposed of or improperly used by means which pollute the waters, land and air and endanger the public health and welfare.

d. Statement of legislative policy

Section 4. Used oil shall be collected and recycled to the maximum extent possible, by means which are economically feasible and environmentally sound, in order to conserve irreplaceable petroleum resources, preserve and enhance the quality of natural and human environments, and protect public health and welfare.

Statements of legislative policy are increasingly important as courts are faced with the need to interpret regulatory schemes so that legislative purposes can be implemented. Section 4 of the Model Act is designed to assist both courts and persons charged with administering the used oil program in determining what the Act requires. In addition to providing the

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209. Refining or rerefining involves the use of refining technology in the treatment of used oil to remove physical and chemical contaminants and enhance used oil quality so as to produce lubricating oil or other petroleum products that are similar to new oil intended for the same purpose. The technology includes, but is not limited to, the use of distillation, chemical treatment, oil additives, hydrogen treatment, and various physical treatments.

The term "reclaim" means to use physical methods, short of those used in rerefining, to cleanse used oil for further use for its original or similar purpose. The methods include settling, heating, dehydration, filtration, and centrifuging and may entail use of oil additives.

The term "reprocess" means to use minimal physical methods to remove water and suspended solids from used oil in preparation for its use primarily as a fuel or fuel supplement. The methods may include settling, chemical pre-treatment, filtration, and dehydration.

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general purpose and constitutional underpinning of the Act (protection of public health and welfare), section 4 lays out the principal components of this purpose (resource conservation and environmental protection), the means adopted to implement this policy (collection and recycling of used oil), and two flexible concepts to be used in determining the scope of these methods of implementation (economic feasibility and environmental soundness).

Inclusion of terms limiting and defining the scope of the Model Act's collection and recycling requirements provides administrative flexibility in that licenses and special permits for the collection, transport, transfer, storage, recycling, use, and disposal of used oil may be issued only upon a finding that the licensee or permittee will exercise his authority in a manner consistent with the policy of the Model Act. Thus, if environmental constraints in a particular area are stringent, the types of licenses or permits issued under the Act can be limited to those compatible with these constraints, i.e., those consistent with the policy of environmental soundness provided in section 4. Similarly, if the concentration of used oil collection sites within an area, the quantities of used oil available, the nature of the market for collected oil, or other factors limit the economic feasibility of certain kinds of collection or recycling requirements, the administrator can tailor the means used to implement the requirements of the Model Act to conditions existing in his area. In either case he will remain bound by the general requirement that used oil be collected and recycled to the maximum extent possible, taking into account local variations in environmental constraints and economic feasibility.

e. Prohibitions on conduct inconsistent with the purposes of the Model Act

The Model Act prohibits conduct which would interfere with its environmental protection and resource conservation purposes.

Section 5. (a) No person shall collect, transport, transfer, store, recycle, use, or dispose of used oil in any manner which endangers the public health or welfare, or violates any law or regulation. (b) Disposal of used oil by discharge to sewers, drainage systems, surface or ground waters, watercourses, or marine waters; or by incineration or deposit on land, unless in accordance with a special permit authorized by section 10, is prohibited.

Section 5(a) is a general prohibition intended to cover a wide variety of uses and disposal methods which endanger the public health or welfare, for example, where they create hazardous emissions or residues of any kind. In addition, section 5(a) ensures that environmental or other laws and regulations remain applicable to used oil after passage of the Model Act. Section

211. Model Used Oil Recycling Act, supra note 178, § 11(c). See text preceding note 222 infra for the language of § 11.
5(b) prohibits those means of disposal which are most clearly wasteful and harmful to the environment. In limiting disposal by incineration or deposit on land to special permit holders, this section ensures that the administrator will retain control over who may safely dispose of used oil other than by recycling.212

f. The public education program

The success of the Model Act in controlling used oil disposal and in ensuring recycling will depend, to a large extent, on voluntary compliance by the public. Although the Model Act provides penalties for its violation213 and requires the Director to enforce compliance,214 it would be unrealistic to expect the Director to apprehend and prosecute every violator, since used oil tends to be dispersed in fairly small quantities in the hands of many users. Consequently, the Model Act provides for a public education program designed to facilitate voluntary compliance.

Section 6. The Director shall conduct a public education program to inform the public of the needs for and benefits of collecting and recycling used oil in order to conserve resources and preserve the environment. As part of this program the Director shall:

(a) adopt rules, in accordance with section 11(a), requiring sellers of more than 500 gallons of lubricating or other oil annually in containers for use off the premises to post and maintain at or near the point of sale durable and legible signs informing the public of the importance of proper collection and disposal of used oil, and how and where used oil may be properly disposed of, including locations and hours of operation of conveniently located collection facilities;

(b) establish, maintain and publicize a used oil information center that will explain local, state and federal laws and regulations governing used oil and will inform holders of quantities of used oil on how and where used oil may be properly disposed of; and

(c) encourage the establishment of voluntary used oil collection and recycling programs and provide technical assistance to persons organizing such programs.

Most of the provisions of section 6 are self-explanatory. The public information and education functions probably could best be coordinated by a member of the staff responsible for the used oil information and education center. Aside from establishment of the center, the program could include providing informational brochures to retailers of oil, to the department of motor vehicles, and to driver or automotive education instructors, who in turn could distribute such brochures to the public at large. Technical assis-

212. Section 10, referred to in § 5(b), requires persons disposing of oil other than by recycling to do so only in accordance with a special permit. See text accompanying note 221 infra.

213. Model Used Oil Recycling Act, supra note 178, §§ 13(b)-(c). See text accompanying note 225 infra.

214. Id. § 13(a).
tance provided to voluntary recycling programs could include such things as manuals suggesting how these programs could be set up, model advertising and promotional materials, and case histories of successful programs. The existence of such voluntary recycling groups would stimulate interest and effort on the part of private citizens, and thus would complement state or municipal informational and regulatory activities.

g. **Collection facilities for small quantities of oil**

Within the last decade there has been a significant increase in "do-it-yourself" oil changes. This trend is reflected in the large volume of automotive lubricating oil sales in mass-market retail stores. Since few such stores provide facilities for return of used oil, individuals who change their own oil often discard the used oil wherever they can—in the garbage, down storm sewers, and in vacant lots. Such disposal methods waste valuable resources and may create fire hazards or cause water pollution. Many "do-it-yourselfers" interviewed in a recent survey indicated a willingness to return used oil if convenient methods for doing so were available. The Model Act is designed to require the creation and maintenance of convenient places for the disposal of small quantities of oil.

Section 7. The Director shall by rule adopted in accordance with section 11(a) prescribe means for the provision of safe and conveniently located facilities for the deposit of used oil by persons possessing not more than 5 gallons at one time at no cost to those persons. The Director may require public persons or sellers of more than 500 gallons of lubricating or other oil annually in containers for use off premises, or both, to provide or contract for the provision of such facilities.

Creation and maintenance of collection facilities could be the responsibility of those who retail oil, of municipal governments (e.g., fire stations or sanitary landfills), of state government, or of a combination of any of these. The Director will have discretion to designate the responsible parties, who in turn will be permitted to contract for the actual provision and maintenance of the facilities. Whoever maintains collection facilities should secure them against theft, vandalism, and fire. Signs should be posted at each collection site stating clearly that the facilities are only for used oil, not for paints, solvents, gasoline, pesticides, or other wastes.

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215. For a discussion of what such voluntary programs might involve, see note 202 supra.

216. It is estimated that retail sales of lubricating oils at non-service station outlets presently constitute between 40 and 50 percent of all automotive lubricating oil sales. Interview with H. E. Tiffany, Marketing Department, American Petroleum Institute, Washington, D.C. (June 20, 1977).

217. Id.

The facilities should be located conveniently for the benefit of those who change their own oil. Since such persons probably will be unwilling to travel long distances to deposit used oil, the Director’s rules could require that facilities be available on the basis of per capita or per square mile minima. The publicity requirements of section 6, particularly those involving the posting of recycling directions in retail oil outlets, should refer specifically to these local collection points.

Since “do-it-yourselfers” will generally be unwilling to pay for the right to deposit used oil, collection services provided to them should be free of charge. Those who generate large amounts of used oil should provide their own storage facilities and pay for regular pickup by collectors licensed in accordance with section 8. Consequently, section 7 limits the quantity that may be deposited during each visit to the public collection facilities.

h. Licensed collectors for large quantities of oil

The Model Act provides for collectors to be licensed to pick up larger quantities of used oil from those ineligible for free disposal under section 7. In conjunction with this licensing provision, the Act limits transfers from collectors to those who will make use of the oil for approved purposes, and provides for record-keeping and reporting of collectors’ activities.

Section 8. (a) A person who transports more than 500 gallons of used oil annually over public ways, hereinafter referred to as a used oil collector, or any storage facility that receives more than 10,000 gallons of used oil annually from one or more used oil collectors, also referred to as a used oil collector, shall do so in accordance with a license issued by the Director.

(b) A licensed used oil collector shall transfer used oil only to another used oil collector licensed under this section; a recycler licensed under section 9; a person with a valid special permit issued under section 10; or a person outside the [State; municipality].

(c) A licensed used oil collector shall provide a receipt to any person to whom used oil is transferred; maintain a complete record of all such transactions, documented by reproducible receipts, for two years; and make fully available to the Director, upon request, all records and copies of receipts for the purpose of review and audit.

(d) A licensed used oil collector shall submit an annual report to the Director on his activities during the calendar year based on the records kept in accordance with section 8(c). The report shall state simply the quantities of used oil possessed at the beginning and end of the reporting period, the total amount collected and the amounts transferred during this period. The amounts transferred shall be itemized as follows: to collectors, recyclers and special permit holders in the [State; municipality], and by State or foreign country for those persons outside the [State; municipality].
"Used oil collector" is defined to exclude one who transports only on his own property or who transports small amounts.\textsuperscript{219} Licensing of collectors should limit the number of unreliable or unscrupulous operations which flourish when used oil is in demand. The 500-gallon threshold permits storage and transport by persons not in business to collect used oil.

Subsections (b), (c), and (d) of section 8 are designed to permit control of the flow of used oil into approved uses and to provide information which will enable monitoring and eventual management of those flows. In many metropolitan areas collectors pick up oil in one jurisdiction and deliver it in another. In order to ensure that receiving states are notified of the amount and locations of delivery, interstate as well as intrastate information should be recorded on the collector's annual report, and the Director should send to his counterparts in another state the information contained in the reports pertaining to that state.

\textit{i. Licensed recyclers}

Section 9 of the Model Act provides for licensing of any person who recycles 5,000 gallons or more of used oil annually. It contains record-keeping and reporting requirements complementary to those for collectors in section 8, to allow annual monitoring of used oil flows throughout the recycling industry. The licensing of recyclers is intended to provide outlets for the oil collected and to control potential adverse environmental effects of recycling.\textsuperscript{220} The 5,000-gallon threshold could be modified in any jurisdiction which adopts the Act, depending on the desired balance between the scope of regulatory coverage and the administrative burdens associated with such coverage.

\textit{j. Licensed disposal of used oil}

In certain circumstances where it would be unreasonably expensive to bring in used oil for recycling, or where the capacity for recycling is not available, other uses or means of disposal may be permitted, provided that they are environmentally sound, even though they may involve the loss of a resource. Section 10 provides the Director with the flexibility necessary for implementing the Act's policy that used oil be recycled only where recycling is economically feasible and environmentally sound.

Section 10. (a) A person who uses or disposes of more than 55 gallons of used oil annually by means other than recycling, including

\textsuperscript{219} The "public ways" limitation in § 8(a) should be construed to require licensing of those who transport oil collected on their own property, if such collection requires transportation over public roads.

\textsuperscript{220} Under § 11 of the Model Act, the Director is required to limit licensees and permittees for collection, recycling, and disposal to operationally safe and environmentally sound methods consistent with the policy of maximum economically feasible protection of the environment expressed in § 4. See text accompanying note 223 infra.
but not limited to road oiling, incineration and landfilling, shall do so only in accordance with a special permit issued by the Director. Use or disposal of less than 55 gallons a year does not require a special permit. This would exempt several uses of used oil on the farm or in small shops, for example. Subsections (b) and (c) of section 10, like their counterparts in sections 8 and 9, provide for record-keeping and reports to the Director by special permit holders.

k. Administration of the used oil program

The section of the Model Act governing administration of the program is designed to incorporate the enacting jurisdiction's existing administrative procedure law. It delineates both the scope of the Director's rulemaking and other responsibilities and the standards under which he is to administer the substantive and procedural elements of the Act.

Section 11. (a) The Administrative Procedure Act [or other appropriate statute or ordinance governing rule making and adjudication] applies to all actions taken under this Act.

(b) The Director shall adopt rules in accordance with section 11(a) governing contents of and fees for applications for licenses and special permits under this Act and procedures for review of applications, and for issuance, renewal, denial, and revocation of licenses and special permits. These rules shall provide for joint licenses or special permits for persons requiring more than one authorization under this Act or other acts administered by the Director. The Director shall also adopt rules prescribing provision of receipts, the keeping of records and the filing of reports by license or special permit holders.

(c) The Director shall issue a license or special permit upon determining that the proposed means for collection, transport, transfer, storage, recycling, use, or disposal is operationally safe, environmentally sound and consistent with the policy of this Act and shall impose terms in a license or special permit requiring the license or special permit holder to install or effect controls, processes, or practices necessary to insure continuous compliance with existing laws and regulations.

(d) A license or special permit shall be valid for one year, but may be renewed upon application.

(e) The Director shall prepare and submit an annual report to the [legislature; council], based in part on information submitted in accordance with sections 8(d), 9(c), and 10(c), summarizing information on used oil collection and recycling, licenses and special permits, analyzing the effectiveness of the Act's provisions in imple-
menting the policies of section 4, and making recommendations for necessary changes in the provisions or their administration.

(f) The Director shall fully implement all sections of this Act as soon as practical, but in no event later than two years after the effective date of this Act.

The Director's licensing responsibilities are of particular importance. Whatever the recycling, use, or disposal method authorized, the license or permit should require compliance with all current laws, regulations, and environmental standards. In addition, as discussed above, section 11 expressly requires the Director to consider the resource conservation and environmental protection policies of the Model Act in making any license or permit decision. Any requirements imposed on applicants as conditions to granting licenses or permits must be environmentally sound and economically feasible, since they are required to be consistent with the policy of the Model Act, as expressed in section 4.

The extent of information required on a license or permit application may vary from state to state, and may depend on the kinds of activities for which the authorization is sought. The Director's rules could call for the name and address of the applicant, the kind and capacity of recycling facilities or the location and means of proposed disposal or use under special permits, the amounts of used oil to be recycled, used, or disposed of, the kinds and amounts of wastes to be generated, waste management practices proposed by the applicant, and the like. This information would assist the Director both in determining whether the application should be approved and in enforcing the conditions of the license or permit once it has been issued.

Fees for applications should not be so high as to discourage entry into the business; other means of funding the used oil program are available, such as general tax revenues or an excise tax on petroleum products. The term of a license or permit could be shorter or longer than the one-year term provided in the Act. This relatively short term is suggested as an accommodation between the ease of administration of a longer term and the greater flexibility of control of a shorter term.

The requirement that records be kept by licensees and permittees enables the Director to monitor and evaluate practices and the programs designed to regulate such practices.

1. Limits on advertising and government recommendations that recycled oil be used

Within the limits of federal law governing labeling and representations of recycled oil products, the purchase of such products should be en-
couraged both by private advertising and through official government recommendations. Without such promotional efforts, the market for products made from used oil may be inadequate to sustain the recycling and collection industries. The Model Act’s section governing seller advertising and government purchase of products made from recycled oil is necessarily dependent on and in furtherance of federal law on the subject.224

Section 12. (a) A person may represent any product made in whole or in part from used oil to be substantially equivalent to a product made from new oil for a particular end use if substantial equivalency has been determined in accordance with rules prescribed by the Federal Trade Commission under section 383(d)(1)(A) of the Energy Policy and Conservation Act, P.L. 94-163, or if the product conforms fully with the specifications applicable to that product made from new oil. Otherwise, the product must be represented as made from previously used oil.

(b) All officials of this [State; municipality] shall encourage the purchase of recycled oil products represented as substantially equivalent to products made from new oil in accordance with section 12(a).

This section is designed to facilitate the sale of recycled oil products of sufficient quality to meet their intended uses and to proscribe misrepresentation of recycled oil products. There have been numerous alleged instances of selling used oil which has merely been decanted as “home heating oil.” Burning such oil poses risks of damage to furnaces, and also produces hazardous air pollutants. State and local officials should encourage the purchase of recycled oil products by public agencies and private persons to provide a market for them and to demonstrate their utility.

m. Enforcement

Enforcement is essential to the credibility of any regulatory system. The Model Act authorizes a range of administrative actions and civil enforcement techniques to provide the flexibility needed by the Director to tailor an enforcement action to the nature of the violation.

Section 13. (a) The Director shall enforce compliance with the provisions of this Act and with the terms of licenses and special permits issued in accordance with this Act.

(b) The Director is authorized to employ the following means of civil enforcement: inspection of the operations of a license or special permit holder; issuance of an administrative order directing specified actions in accordance with a specified schedule; imposition of a civil administrative penalty of up to $500 per day for each violation; revocation of an issued license or special permit, after

224. See text accompanying notes 190-197, 199-201 supra.
providing an opportunity for a hearing; and a civil action seeking equitable relief or civil penalties of up to $1,000 per day for each violation or both.

(c) A person who violates sections 5 or 12, or any term of a license or special permit under this Act, is guilty of a misdemeanor and may be fined up to $5,000 per day for each violation.

Civil actions seeking equitable relief could include injunctive relief. The combination of administrative penalties and civil enforcement actions should be effective in curtailing violations of all sections of the Model Act. In addition, violation of license and permit standards and the prohibitions on improper disposal and improper advertising is made a misdemeanor for each day of violation. Where state law requires, the Director would utilize the enforcement authority provided in this section in collaboration with the state attorney general.225

3. State Responses to the Model Act

Several states have considered or enacted legislation dealing with used oil since the Model Act was drafted. In some states, the legislation would only have required that the used oil problem be studied,226 or that existing administrative agencies promulgate rules and regulations based on the Model Act.227 Other states have considered legislation similar to the Model Act, but have not yet enacted it.228 Minnesota and Utah have enacted statutes addressing some facets of the used oil problem, and California has recently enacted legislation quite similar to the Model Act. The following discussion is limited to the Minnesota, Utah, and California legislation.

225. A further question is whether a state could require compliance with the provisions of the Model Act by a federal agency. For example, the U.S. Forest Service is known to apply used oil to roads in national forests as a dust suppressant. Under § 5 of the Model Act, see text accompanying note 212 supra, such applications would be a prohibited disposal on land. Absent congressional consent, however, the state might not be able to enforce such prohibitions on federal installations. See Hancock v. Train, 426 U.S. 167 (1976).

226. For example, a Nevada proposal, A.C.R. 37 (1977), would only have directed a legislative commission to study the re-refining of collectable waste oils. Both A.C.R. 37 and another Nevada bill that would have required oil sellers to provide collection facilities, A.B. 705 (1977), died in committee.


a. Minnesota and Utah

Neither the Minnesota\textsuperscript{229} nor the Utah\textsuperscript{230} statute is as comprehensive as the Model Act. Instead, legislators in these states have focused on specific problems associated with collection or rerefining of used oil, and have enacted legislation which, although less complicated than the Model Act, fails to regulate the final disposition of used oil. Nevertheless, these statutes represent the first efforts to confront the used oil problem at the state level, and should be effective in fulfilling their limited purposes.

Minnesota’s statute focuses on the need to provide convenient collection facilities for oil used in motor vehicles. Rather than provide a general definition of used oil as in the Model Act, Minnesota has defined “used motor oil” to include only “petroleum based oil used as a lubricant in a motor vehicle,”\textsuperscript{231} which “through use, storage or handling has become unsuitable for its original purpose . . . .”\textsuperscript{232} All retail sellers of motor oil are required either to provide collection facilities or to post notices informing customers of the location of the nearest collection facilities.\textsuperscript{233} The Minnesota statute thus solves the critical problem (addressed in section 7 of the Model Act)\textsuperscript{234} of ensuring that “do-it-yourselfers” will know where they can dispose of their oil. The statute provides only a partial solution since it neither requires users to deposit the oil at the collection facilities nor addresses the issue of how to ensure safe disposal once the oil has been collected.

Utah’s statute is entitled the Utah Oil Rerefinement Act and is designed primarily to encourage used oil rerefining. After stating that rerefining is desirable and that used oil collection systems need to be better coordinated in order to channel more oil to rerefiners,\textsuperscript{235} the statute proceeds to regulate who may rerefine used oil. Rerefiners are required to obtain permits, and must provide information on proposed operations, including methods of disposing of rerefining wastes, before permits can be granted.\textsuperscript{236} Furthermore, “every automobile service station, boat marina, industrial operation, airport, trucking terminal or state or local government facility which generates at least 500 gallons of used oil annually”\textsuperscript{237} is required to dispose of used oil, regardless of quantity, through either a “used oil dealer or [a] rerefiner.”\textsuperscript{238}

\textsuperscript{229} 1977 Minn. Sess. Law Serv., ch. 68 (West), \emph{to be codified at} Minn. Stat. §§ 325.814-816.
\textsuperscript{230} 1977 Utah Laws, ch. 55.
\textsuperscript{231} 1977 Minn. Sess. Law Serv., ch. 68, § 1(2) (West).
\textsuperscript{232} Id. § 1(3).
\textsuperscript{233} Id. § 2.
\textsuperscript{234} See text accompanying note 216-218 supra.
\textsuperscript{235} 1977 Utah Laws, ch. 55, § 2.
\textsuperscript{236} Id. § 4.
\textsuperscript{237} Id. § 3(2).
\textsuperscript{238} Id. § 5.
The principal reason for the latter requirement is to channel quantities of oil that otherwise would be dispersed into the hands of used oil dealers who can then sell the oil to rerefiners.239 However, the Utah statute leaves to used oil dealers240 the decision whether oil should be sold to rerefiners or otherwise disposed of. Further, it does not regulate uses or disposal methods other than rerefining, nor does it impose substantive waste disposal standards on rerefiners. These omissions occurred despite a legislative finding that used oil constitutes an environmental and a human health hazard.241

b. California’s Used Oil Recycling Act

A bill patterned after the Model Act, Senate Bill 68, was introduced early in the 1977 session of the California Legislature.242 After several important amendments this bill (the California Used Oil Recycling Act243) was passed and signed by the Governor late in September, 1977. The final version of the Act contains substantially the same legislative findings and policy statements as are provided in the Model Act,244 and requires a similar public education program.245 Although the California Act establishes a program for collecting and recycling used oil that is similar to the Model Act, several deviations from the language of the Model Act limit its coverage and make it primarily a tool for regulating recycling rather than disposal methods.

California’s scheme for control of used oil disposal methods fails to include the Model Act’s requirement of special permits for used oil disposers,246 and expressly permits application of used oil for purposes of road maintenance, agricultural dust control, or weed abatement.247 The Model Act’s specific prohibitions on disposal “by discharge into sewers, drainage systems, surface or ground waters, watercourses, or marine waters, or by incineration or deposit on land” are retained,248 but road maintenance, dust

239. Rerefining of waste oil requires reconcentrating the oil for collection and delivery to a rerefinery. The present uncoordinated collection system results in less than 10% of the waste oil reaching a rerefinery. For these reasons . . . it is the purpose and intent of this act to establish an effective program to promote the rerefining of used oil. Id. § 2.

240. The term “used oil dealer” is never defined in the Utah Act. Id. § 2.

241. Id. § 2.

242. S.B. 68, Cal. Reg. Sess. (1977), 1977 Cal. Stats., ch. 1158, to be codified at CAL. PUB. RES. CODE §§ 3460-3473. Another bill, S.B. 160, Cal. Reg. Sess. (1977), was also similar to the Model Act. S.B. 160 was abandoned as S.B. 68 received the Legislature’s primary attention. Citations to the California Act hereinafter are to those sections it adds to CAL. PUB. RES. CODE.

243. California has adopted the Model Act’s suggested short title. Id. § 3460. See the Model Used Oil Recycling Act, supra note 178, § 1.

244. CAL. PUB. RES. CODE §§ 3462, 3463, to be added (1978). The corresponding sections of the Model Act are in text accompanying notes 209-211 supra.

245. Id. §§ 3465(b)-(d). The corresponding sections of the Model Act are in text accompanying notes 214-215 supra.

246. See text accompanying note 221 supra.

247. CAL. PUB. RES. CODE § 3464(b), to be added (1978).

248. Id. The Model Act’s prohibition is in text accompanying note 212 supra.
control, weed abatement, and burning for fuel are excluded from the definition of "disposal."\footnote{249} The deletion of the special permit requirement may not seriously hamper the effectiveness of the prohibitions, but in characterizing certain uses as not constituting "disposal," the California version of the Model Act leaves open the possibility that environmental and health hazards will continue to be created through unregulated methods of application for the permitted purposes.\footnote{250}

The California Act requires used oil collectors to be registered rather than licensed,\footnote{251} and modifies the Model Act's definition of "collector" to exclude persons "collecting solely from sources owned and operated" by themselves.\footnote{252} The change in language from "licensed" to "registered" does not appear overly significant,\footnote{253} since the State Solid Waste Management Board is required to register collectors only if it "determines that the [applicant's] proposed means for collection, transport, transfer, [or] storage . . . is operationally safe, environmentally sound, and consistent with the provisions of [the Act]."\footnote{254} In addition, the Board is given authority to impose restrictions or other terms "requiring the registration holder to install or effect controls, processes, or practices necessary to insure continuous compliance with existing laws and regulations,"\footnote{255} and registration can

\footnote{249. \textsc{Cal. Pub. Res. Code} § 3464(b), to be added (1978).}
\footnote{250. The hazards of such disposal methods are discussed at text accompanying notes 8-16 \textit{supra}.}
\footnote{251. \textsc{Cal. Pub. Res. Code} § 3467(a), to be added (1978).}
\footnote{252. \textit{Id.} See note 219 \textit{supra} and accompanying text for a discussion of the Model Act's coverage of oil "collected" by those who generate it and then transport it over public roads.}
\footnote{253. The California Office of Planning and Research (OPR), an arm of the Governor's office, strongly objected to the Model Act's requirement that licenses for collectors and recyclers be renewed annually for a fee, see text accompanying note 223 \textit{supra}, on the grounds that it would be excessively expensive, inefficient, and bureaucratic, would discourage recyclers from entering the market, and would interfere with "local governments' existing police powers to grant franchises for waste disposal." Office of Planning and Research, \textit{Used Oil Recycling Act: Analysis of Proposed Legislation} I (Dec. 6, 1976). The State Solid Waste Management Board (SWMB) countered that the licensing provision was necessary "to regulate the final disposition of used oil," and that new entrants to the recycling business would not be discouraged so long as they "performed according to standards." Letter from Albert A. Marino, Executive Officer, Solid Waste Management Board, to Larry Haas, Legislative Coordinator, Air Resources Board (Jan. 7, 1977). SWMB also thought that local government waste disposal franchising authority would be unaffected. \textit{Id.}}
be revoked for noncompliance. The decision not to require registration by persons "collecting" their own oil, while it may result in permitting unregulated collection and transportation of used oil by large commercial enterprises with geographically dispersed operations, also does not undermine the basic thrust of the registration requirements.

Recyclers, like collectors, are to be registered rather than licensed. The Solid Waste Management Board has authority to impose terms and conditions on the registrant, as in the case of collectors. The California Act retains, both for recyclers and for collectors, the same record-keeping and information-gathering requirements that are provided in the Model Act.

The provision of collection facilities for the use of "do-it-yourselfers" and others who generate small quantities of used oil will be handled differently in California than under the Model Act. Persons selling oil to consumers need only post notices informing customers of the location of collection facilities. Rather than authorizing a requirement that sellers provide collection facilities, the California Act delegates authority to the Solid Waste Management Board to adopt rules prescribing "means for the provision of safe and conveniently located collection facilities for the deposit of used oil by persons possessing not more than five gallons at one time at no cost to those persons." Since earlier language requiring the Board to mandate that sellers create and maintain such facilities was dropped, the rulemaking authority of the Board under the enacted language probably would be construed as limited to regulation of voluntary private facilities, but would include ability to adopt rules requiring maintenance of such facilities by state agencies and local governments.

The definition of used oil limits the California used oil program's coverage to oil that has been sold to consumers and is recyclable. By

256. See note 253 supra.
257. CAL. PUB. RES. CODE § 3468(a), to be added (1978).
258. Id. § 3470(c). See also text accompanying notes 254-255 supra.
259. Id. §§ 3467(c)-(d), 3468(b)-(c).
260. Id. § 3465(a). The Model Act would authorize requiring sellers to provide collection facilities. See text accompanying notes 216-218 supra.
261. Id. § 3466. This section reads:
   The board shall by rule adopted in accordance with subdivision (a) of Section 3470 prescribe means for the provision of safe and conveniently located collection facilities for the deposit of used oil by persons possessing not more than five gallons at one time at no cost to those persons.
262. As originally introduced, S.B. 68, like the Model Act, permitted the Board to impose such requirements. S.B. 68, Cal. Reg. Sess. § 3466 (1977), as introduced Dec. 28, 1976. This section was then amended to require imposition of such requirements for provision of collection facilities. S.B. 68, Cal. Reg. Sess. § 3466 (1977), as amended Feb. 9, 1977. Finally, § 3466 was amended to include only the language set forth in note 261 supra.
263. CAL. PUB. RES. CODE § 3460(a), to be added (1978). This section reads:
   "Used oil" means a petroleum based oil which, after sale to a consumer, through use, storage, or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties and is suitable for recycling.
omitting nonrecyclable used oil264 from the definition, the California Act allows continued unregulated disposal of oils which may nevertheless pose environmental hazards if disposed of improperly. Further, the addition of the phrase "which, after sale to a consumer," might be construed also to exempt from coverage most industrial oils, although these may pose the same kinds of hazards as oil that has been sold to a consumer. Such a construction of the Act should be avoided.265

The California Act, despite its drawbacks, is the most comprehensive effort by a state to control disposal and assist in recycling and collection of used oil. It still closely resembles the Model Act, and demonstrates the usefulness of such model legislation in the legislative process. Undoubtedly, as other states continue to consider or reconsider used oil legislation, the Model Act and its California version will exert considerable influence.

264. The requirement that used oil be "suitable for recycling," id., is not further defined in the California statute. The statute's definition of recycling, id. § 3460(b), is identical to that of the Model Act, see text accompanying note 209 supra, except that it deletes the Model Act's requirement that the method of recycling be operationally safe, environmentally sound, and in compliance with all laws and regulations. (This deletion should not affect the requirement that recyclers utilize such safe recycling methods, which can be imposed on registered recyclers under CAL. PUB. RES. CODE § 3470(c), to be added (1978). See text accompanying note 254 supra.) For a discussion of types of waste oil which may be unrecyclable without pretreatment, see text accompanying notes 42-43 supra.

265. Since the term "consumer" is never defined in the California Act, it is difficult to tell whether used oil would include oils sold for use in industrial processes as lubricants or otherwise. If the vernacular meaning of "consumer" is deemed to control interpretation of CAL. PUB. RES. CODE § 3460(a), oil sold other than to individuals for use in their non-business activities would appear to be excluded from the definition of used oil. The consequence of this interpretation would be to exempt from the Act's coverage not only industrial oils, but also oil used by farmers, small businesses, and government entities. The vernacular meaning should not be deemed controlling, since other provisions of the Act seem to extend its coverage to businesses of various kinds. See, e.g., id. § 3460(d) (defining "person" as any "individual, private or public corporation, partnership, cooperative, association, estate, municipality, political or jurisdictional subdivision, or government agency or instrumentality"); id. § 3464(a) ("No person shall collect, transport, transfer, store, recycle, use, or dispose of used oil in violation of any provision of this article or any rule or regulation adopted pursuant thereto," (emphasis added)); id. § 3467(a) ("person collecting used oil from sources owned and operated by the person" (emphasis added) exempted from used oil collector registration requirement; use of term "used oil" in discussing used oil generators having more than one "owned and operated" source suggests that drafters had in mind businesses, not just purchasers of oil for personal use). The use of the term "consumer" thus probably does not exempt commercially or industrially used oil from the Act's coverage, but simply requires the oil to have passed out of the manufacturer's or wholesale or retail seller's hands into the hands of its final user, before it is subject to regulation under the Act. See Joseph's of California v. Alcoholic Beverage Control Appeals Bd., 19 Cal. App. 3d 785, 788, 97 Cal. Rptr. 183, 185 (1971) (CAL. BUS. & PROF. CODE § 24862, prohibiting certain sales of wine to "consumers," held to denote "the person last in the chain of sales, passing through the various stages of distribution to the retailer, and from him to the ultimate buyer"). Some industrial oils may, however, be exempt due to the requirement that used oil be "suitable for recycling." See note 264 supra and accompanying text.

Under the Resource Conservation and Recovery Act of 1976 (RCRA), EPA must promulgate by regulation a set of identifying characteristics for, and a list of, hazardous wastes which would be controlled under federal law. If used oil meets such characteristics or is included in such a list, states would be prohibited from imposing requirements less stringent than those required under the RCRA and regulations promulgated thereunder. Consequently, any state considering used oil legislation should do so with a view toward eventual compliance with the federal statute. The following discussion briefly outlines the requirements of the RCRA, and compares its regulatory provisions with those of the Model Act.

a. Used oil regulation under the RCRA

For the purposes of this Article, the important issue is whether used oil will be considered a hazardous waste under the RCRA. The provisions of the RCRA and recent EPA statements on hazardous wastes indicate a substantial possibility that used oil would be so considered, and therefore subject to the provisions of the Act.

Under the RCRA, EPA is required, no later than April 21, 1978, to promulgate regulations identifying the characteristics of and listing particular hazardous wastes, the transportation, generation, and disposal of which would be regulated under the RCRA. In the absence of an authorized state program regulating hazardous wastes, EPA must enforce compliance with the regulations and other requirements of the RCRA, and no state may impose restrictions less stringent than those required under the RCRA.

A state may implement its own program only if authorized by EPA, and such authorization may not be granted if the proposed state program is: (1) not equivalent to the federal program; (2) not consistent with the federal program or with other authorized state programs; or (3) inadequate in its 266. Pub. L. No. 89-272, as added by Pub. L. No. 94-580, 90 Stat. 2798 (1976), 42 U.S.C.A. §§ 6901-6931 (1977). For a recent and more detailed discussion of the Resource Conservation and Recovery Act of 1976, see Kovacs & Klucisik, The New Federal Role in Solid Waste Management: The Resource Conservation and Recovery Act of 1976, 3 Colum. J. Envt'l. L. 205 (1977). It is also conceivable that oil use and disposal could be regulated under the Toxic Substances Control Act, Pub. L. No. 94-469, 90 Stat. 2003 (1976), 15 U.S.C.A. §§ 2601-2629 (West Supp. 1977), if the oil is found to present "an unreasonable risk of injury to health or the environment." See, e.g., id. § 2605.
268. Id. § 6929. See text accompanying notes 273-275 infra.
269. Id. § 6921. It is unlikely that these regulations will be promulgated by the deadline.
270. Id. §§ 6922-6924.
271. Id. § 6928.
272. Id. § 6929.
273. Id. § 6926(b).
provisions for enforcing compliance.\textsuperscript{274} If an authorized state program should subsequently become inadequate under these standards, authorization must be revoked by EPA.\textsuperscript{275}

Under the RCRA, a hazardous waste is defined as

a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.\textsuperscript{276}

Since the term "solid waste" used in the above definition includes liquids and semisolids,\textsuperscript{277} used oil would fit within the definition of hazardous wastes provided in the Act when the other elements of the definition are met. The EPA regulations identifying the characteristics of and listing hazardous wastes are required by statute to be based on such criteria as toxicity, persistence, degradability in nature, potential for accumulation in tissue, flammability, corrosiveness, and other hazardous characteristics.\textsuperscript{278}

As "other hazardous characteristics" EPA is considering reactivity, radioactivity, and potential for causing disease.\textsuperscript{279} Some kinds of used oil, as well as used oils contaminated with some substances, will meet the

\textsuperscript{274} Id.
\textsuperscript{275} Id. § 6926(e).
\textsuperscript{276} Id. § 6903(5).
\textsuperscript{277} Id. § 6903(27). This section states:

The term "solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities . . . .

\textsuperscript{278} Id. § 6921(a).

The preliminary draft regulations contain no list of hazardous wastes. This fact is explained in a covering letter which accompanied the preliminary draft:

The Agency working group is still evaluating the use of lists with the criteria. Several options for lists include waste types, process types, industry categories, substances, or a combination. In addition, whether the list is an example of wastes that are potentially hazardous, a definitive enforceable list of those defined to be hazardous, or some other approach is still under discussion. The relationship of the criteria to these list types if also under review.

statutory definition and the criteria for EPA's regulations identifying and listing hazardous wastes. Thus, an appraisal is necessary of whether a state program patterned after the Model Act would be in compliance with the RCRA.

b. Operation of the Model Used Oil Recycling Act under the RCRA

The federal controls on generation, transportation, and disposal of hazardous wastes differ from those in the Model Act in several significant ways. In addition, the civil and criminal penalties provided in the Model Act are significantly lower than those required under the RCRA. Although many of the RCRA’s standards might be met by imaginative use of the rulemaking and license-conditioning authority provided in section 11 of the Model Act, state legislatures should both consider amending provisions of the Model Act itself to conform to federal requirements, and exercise caution in restricting the rulemaking authority and licensing standards available to the Director under the present version of the Model Act.

The first significant difference between the Model Act and the RCRA is the latter’s requirement that generators of hazardous wastes be subject to standards governing record-keeping, reporting, labeling, and choice of containers for hazardous wastes. The Model Act imposes no such standards on used oil generators.

Second, the RCRA would require generators and transporters of used oil to comply with a manifest system designed to ensure that all hazardous wastes are “designated for treatment, storage, or disposal facilities (other than facilities on the premises where the waste is generated) for which a permit has been issued as provided [in the RCRA].” The Model Act has no manifest system that would be in compliance with this provision.

Third, transporters of used oil would be required under the RCRA to comply with standards governing transport to the destination specified in the manifest, labeling of containers in transport, and record-keeping. These standards go beyond the provisions in section 8 of the Model Act governing licensing standards for collectors and storage facilities. Although rules requiring licensees to utilize safe methods of transportation, which could

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280. The characteristics of used oil, including flammability and toxicity, and the environmental and health hazards of improperly using, treating, storing, transporting, or disposing of it are discussed in the text accompanying notes 6-37 supra.

281. See text accompanying notes 211, 222-223 supra.

282. For example, the California statute discussed in text accompanying notes 242-265 supra deletes the Model Act's special permit requirement for disposal of used oil. See text accompanying note 246 supra. If the RCRA's requirements are deemed applicable to used oil, this permit requirement would have to be reinstated in order to achieve compliance with the RCRA. See text accompanying note 291 infra.


284. Id. §§ 6922(5), 6923(a).

285. Id. § 6923(a).

286. See text accompanying note 219 supra for the provisions of the Model Act. The RCRA would require the following:
include implementation of a manifest system, could be attached as conditions for granting licenses under section 11 of the Model Act, states should consider amending the Model Act to provide specifically for such transportation standards.

Fourth, under the RCRA all storage facilities, used oil recyclers, and those disposing of used oil by permit (presently regulated under sections 8, 9, and 10 of the Model Act) would be subject to performance standards applicable to owners and operators of facilities for the treatment, storage, or disposal of hazardous wastes. These standards would apply regardless of the quantity treated, stored, or disposed of, and such activities could not be conducted without first obtaining permits. While the Model Act does require licenses and permits for such activities, the Model Act's minimum quantity exemptions from licensing requirements would not conform to the RCRA. Moreover, the performance standards (which include standards governing location, design, and construction of facilities, contingency plans for unanticipated damage, and qualifications for ownership, continuity of operation, financial responsibility, and personnel training), while they might be imposed through aggressive exercise of license and permit rulemaking authority under the Model Act, should probably be more carefully specified in a state statute drafted to comply with the federal requirements.

Finally, the Model Act's enforcement section imposes civil and criminal penalties that are significantly lower than those provided in the RCRA. Since a state program may not be authorized unless it provides

[The] standards shall include but need not be limited to requirements respecting—
(1) recordkeeping concerning such hazardous waste transported, and their 
[sic] source and delivery points;
(2) transportation of such waste only if properly labeled;
(3) compliance with the manifest system referred to in section 6922(5) of this 
title; and
(4) transportation of all such hazardous waste only to the hazardous waste 
treatment, storage, or disposal facilities which the shipper designates on the manifest 
form to be a facility holding a permit issued under this subchapter.
Id. § 6923(a).
287. See text accompanying notes 211, 222-223 supra.
288. See text accompanying notes 219-221 supra.
290. No section of the RCRA provides an exemption from standards and permit require-
ments on the ground that the person does not generate, transport, treat, store, or dispose of 
more than a given minimum quantity of hazardous wastes. See id. §§ 6922-6925.
291. Id. § 6925.
292. Id. § 6924(4).
293. Id. § 6924(5).
294. Id. § 6924(6).
295. See text accompanying notes 211, 222-223 supra.
296. See text accompanying note 225 supra.
297. 42 U.S.C.A. § 6928 (1977). The criminal penalty provision provides:
Any person who knowingly—
(1) transports any hazardous waste listed under this subchapter to a facility 
which does not have a permit under section 6925 of this title (or section 6926 of 
this title in the case of a State program).
"adequate enforcement of compliance with the requirements of [the RCRA]"\textsuperscript{298} strengthening the Model Act’s enforcement section might be warranted.

Of course, given the uncertain status of used oil as a hazardous waste under the RCRA, states do not need to adopt a strengthened version of the Model Act immediately. Amendments to bring state used oil legislation into compliance with the requirements of the RCRA could be enacted later, in conjunction with legislation designed to enable a state to obtain authorization to administer and enforce a comprehensive hazardous waste management program under the RCRA.\textsuperscript{299}

**CONCLUSION**

Given the hazards that accompany improper disposal of used oil, states should consider legislation to control the disposal and recycling of this valuable byproduct of industrial society. This Article has presented a number of models for used oil regulation. The availability of these models—not only the Model Used Oil Recycling Act but also legislation in European nations—will facilitate the legislative task of devising methods for attaining policy goals.\textsuperscript{300}

\textsuperscript{298} 30 U.S.C.A. § 6926(b)(3). However, the August 31, 1977 draft guidelines for assisting states in the development of hazardous waste management programs (authorized by § 6926(a)) provide that:

> The Administrator will not establish quantifiable standards against which State programs must be judged. The Regional Administrator will instead examine the State proposal in order to assure himself that the enforcement provisions of the proposed State program are adequate, and that the state will administer and enforce its program successfully. The Regional Administrator will base his judgment upon a comparison of the proposed State enforcement procedures, practices, and penalties with those contained in the Act, and with those implemented by the Environmental Protection Agency for such States as do not seek or receive authorization under § 3006(b) [42 U.S.C.A. § 6926(b)] or § 3006(c) [42 U.S.C.A. § 6926(c)].


\textsuperscript{299} The provision for authorized state hazardous waste programs, 42 U.S.C.A. § 6926 (1977), is supplemented by EPA authority to allocate funds to state governments for the development and implementation of authorized plans. Id. § 6931.

\textsuperscript{300} These models should also be adaptable to other kinds of recyclable materials. See note 2 supra. For example, a person who is both a reconditioner of steel drums and a rerefiner...
Of course, no model can exactly meet the needs of each individual state. The precise approach chosen will depend on circumstances in the particular jurisdiction—the types and amounts of used oil generated and collected, available means of recycling or disposal, and the nature and extent of damages or risks to public or environmental health or to other resources. States will have to consider such factors as program costs and impact on the private economy in determining the appropriate extent of government intervention.

As the various models discussed in this Article are implemented, legislators will have an opportunity to assess the relative effectiveness and efficiency of the models in meeting the goals of resource conservation and environmental protection. Reform and refinement of existing programs will be necessary, as the German experience with comprehensive used oil regulation demonstrates. But the basic principles of used oil disposal and recycling regulation have already been developed in the existing legislation, and the lack of a perfected, universally applicable model should not discourage legislatures from beginning now to implement similar programs.

familiar with the German Used Oil Law (described at text accompanying notes 74-96 supra) has proposed the adaptation of the German law from the oil industry to the steel industry, to "serve the national interest by conserving energy and natural resources."

In the case of drums, the charge should be collected from the steel industry, or its drum manufacturing subsidiaries. It should be imposed on top of prevailing prices. The filler would have to pay an accordingly increased price, thereby making the throw-away drum lose part of its commercial attraction against the reusable all 18 gauge drum, which would regain interest.

The specific amount of this charge should be worked out in the form of a sliding scale, considering weight or metal thickness. The lower the weight, the higher the charge.

In the case of drums, the fund should be instituted by a special body and used for such purposes as: extra non-profitable collection cost of empty, non-reusable drums, cost of storage, transport and handling, or possible re-forming of those drums, from which the only return is the low scrap metal value, into metal bales. The operation of such a non-profit service cannot be organized efficiently by any private drum reconditioning firm without being subsidized, which subsidy should be provided from the fund.