



The Used Oil Management Handbook: Guidance for Used Oil Handlers



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HAZARDOUS WASTE PROGRAM
LAND DIVISION

Preface

The State of Alabama adopted, effective January 5, 1995, the recycled used oil management standards contained in Chapter 279 of Title 40 of the Code of Federal Regulations (40 CFR 279), which were promulgated by the EPA in Volume 50 of the Federal Register, September 10, 1992. Alabama's version of the used oil management standards is contained in Chapter 335-14-17 of Division 14 of the Alabama Department of Environmental Management Administrative Code (ADEM Admin. Code) and, with only a few exceptions, is essentially the same as those contained in 40 CFR 279. ADEM Admin. Code Ch. 335-14-17 applies to used oil generators, collectors, transporters, processors and re-refiners, burners, and marketers of used oil. The new standards subsume the previous standards for burning used oil for energy recovery formerly contained in ADEM Admin. Code r. 335-14-7-.05 (40 CFR 266, Subpart E).

You may view or download a free copy of ADEM Admin. Code div. 335-14 on the Department's web page at <http://www.adem.alabama.gov/alEnviroRegLaws/default.cnt>. A hardcopy of the regulations may be obtained by written request to the address below. A nominal fee for copying may be charged:

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P.O. Box 301463
Montgomery, Alabama 36130-1463
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Table of Contents

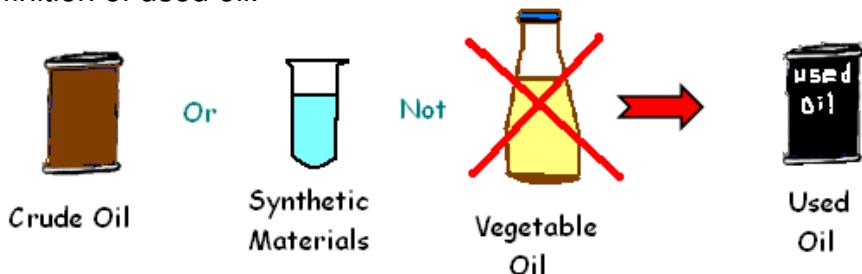
<i>The Used Oil Management Handbook: Guidance for Used Oil Handlers.....</i>	1
Chapter 1 - What is Used Oil	5
Chapter 2 - To Whom Do The Used Oil Standards Apply?.....	7
Used Oil Generators	7
Used Oil Transporters	8
Used Oil Transporter Transfer Facilities.....	8
Used Oil Processors	8
Off-Specification Used Oil Fuel Burners.....	9
Used Oil Fuel Marketers	10
Is All Used Oil Regulated By The Used Oil Management Standards?	10
Chapter 3 – What Are The Notification Requirements?	11
Chapter 4 - What Are The Requirements For Used Oil Storage?	12
How Do I Manage Used Oil Filters?	13
Oops! What is the proper way to clean up a used oil spill?	14
Chapter 5 - Do The Hazardous Waste Regulations Apply To Used Oil?	16
Used Oil Sent For Disposal	16
Used Oil Mixed With Hazardous Waste	16
Chapter 6 - How Do I Prove That My Used Oil Is Not A Hazardous Waste?	17
Chapter 7 - How Are Mixtures Of Used Oil And Other Materials Regulated?	19
Chapter 8 - What are the Used Oil Specifications?.....	21
Chapter 9 - How Are Used Oil Collection Centers And Aggregation Points Regulated?	22
Chapter 10 - Used Oil as a Resource	23
Re-refining Used Oil.....	23
Re-refining versus Processing	24
What Can Be Made from Re-refined Used Oil?	24
Burning Used Oil for Energy Recovery.....	24
Chapter 11 - Useful Federal Register Notices	25
Contact Information.....	25
Chapter 12 - Test Methods For Determining Halogen Content Of Used Oil	26

Chapter 1 - What is Used Oil

As defined in ADEM Admin. Code r. 334-14-1-02(1)(a)276., "Used Oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use, is contaminated by physical or chemical impurities. During normal use, impurities such as dirt, metal scrapings, water, crude oil, or chemicals can get mixed in with the oil, so that in time the oil no longer performs well.

Eventually, this used oil must be replaced with virgin or re-refined oil to do the job at hand. ADEM's used oil management standards include a three-pronged approach to determine if a substance meets the definition of used oil. To meet ADEM's definition of used oil, a substance must meet each of the following three criteria:

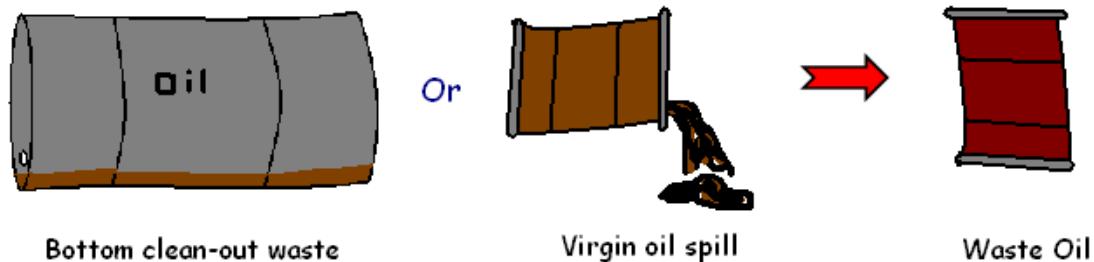
- **Origin** – the first criterion for identifying used oil is based on the origin of the oil. Used oil must have been refined from crude oil or made from synthetic materials. Animal and vegetable oils are excluded from ADEM's definition of used oil.



Used oil is derived from Crude Oil or Synthetic Materials that have been used.

Vegetable oil is not regulated as used oil.

- **Use** – the second criterion is based on whether and how the oil is used. Oils used as lubricants, hydraulic fluids, heat transfer fluids, buoyants, and for other similar purposes are considered used oil. Unused oil such as bottom clean-out waste from virgin fuel oil storage tanks or virgin fuel oil recovered from a spill, do not meet ADEM's definition of used oil because these oils have never been "used". These virgin fuel oils that have never been used but have become wastes are called **waste oil**. ADEM's definition also excludes products used as cleaning agents or solely for their solvent properties, as well as certain petroleum-derived products like antifreeze and kerosene.



Waste oil is unused oil that results from tank bottom clean-out waste or unused oil spills.

- **Contaminants** – the third criterion is based on whether or not the oil is contaminated with either physical or chemical impurities. In other words, to meet ADEM's definition, used oil must become contaminated as a result of being used. This aspect of ADEM's definition includes residues and contaminants generated from handling, storing, and processing used oil. Physical contaminants could include metal shavings, sawdust, or dirt. Chemical contaminants could include solvents, halogens, or saltwater.



Just one gallon of used oil can pollute 1,000,000 gallons of fresh water.

Examples of used oil:

- Transmission fluid
- Brake fluid
- Power steering fluid
- Off-road engine oil
- Compressor oil
- Bearing oil
- Hydraulic oil
- Gear oil
- Electrical oil
- Grease
- Refrigeration oil
- Buoyancy oils
- Isolation oils
- Rolling oil
- Cutting oil

Examples of materials that are not used oil:

- ✓ Waste oil-oil that has not been used
- ✓ Solvents-petroleum based materials used for their solvent or cleaning properties, such as mineral spirits
- ✓ Vegetable oil
- ✓ Animal oil
- ✓ Antifreeze

Chapter 2 - To Whom Do The Used Oil Standards Apply?

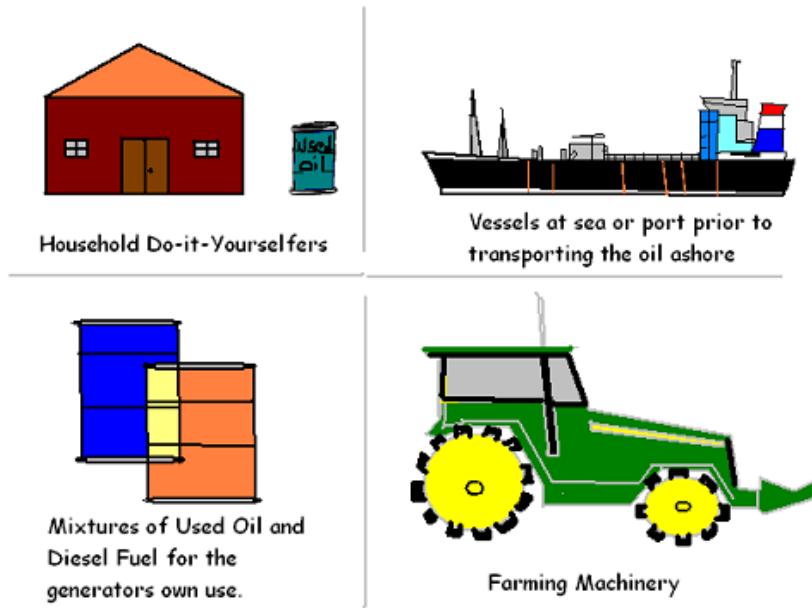
Used Oil Generators



A garage owner pours used oil into a catch container.

A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation. Used oil generators must comply with ADEM Admin. Code r. 335-14-17-03. The standards for used oil generators apply to all used oil generators except:

1. Household "do-it-yourself" (DIY) generators;
2. Vessels at sea or port prior to transporting the oil ashore;
3. Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles; and
4. Farmers who generate an average of 25 gallons per month or less of used oil **from** machinery used on the farm.



Activities that are exempt from the used oil regulations.

Used Oil Transporters



A tanker truck transporting used oil.

A used oil transporter is any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of transfer facilities. Transporters who import used oil from abroad or who export used oil outside of the United States are subject to the used oil transporter standards from the time the used oil enters to the time the used oil exits the United States. Used oil transporters must comply with ADEM Admin Code r. 335-14-17-05. This includes obtaining a transporter permit from ADEM and being able to demonstrate financial assurance. The used oil transporter standards apply to all transporters except:

1. Onsite transporters;
2. Generators who transport shipments of 55 gallons or less from the generator in a vehicle owned by the generator to a recognized used oil collection center or an aggregation point owned or operated by the same generator; and
3. Transportation of used oil generated by household DIY generators from the initial generator to a regulated used oil handler.

Used Oil Transporter Transfer Facilities

A used oil transfer facility is any transportation related facility including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours and not greater than 35 days during the normal course of transportation. Used oil transfer facilities must comply with ADEM Admin. Code r. 335-14-17-05. Used oil transfer facilities that store used oil for more than 35 days are also subject to regulation under ADEM Admin. Code r. 335-14-17-06.

Used Oil Processors

A used oil processor is an owner or operator of a facility that processes used oil. Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for the production of, fuel oils, lubricants, or other used oil derived products. Used oil processors must comply with ADEM Admin. Code r. 335-14-17-06. This definition applies to all processors and re-refiners except:

1. Transporters that conduct incidental processing operations that occur during the normal course of transportation and
2. Burners that conduct incidental processing operations that occur during the normal course of used oil management prior to burning.

➤ Preparedness and Prevention – Used oil processors and re-refiner facilities must comply with preparedness and prevention requirements that are very similar to those required for large quantity generators of hazardous waste. The facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water which could threaten human health or the environment. Provisions must also be made to deal with any emergencies that do occur.



Some of the potential hazards of managing used oil.

➤ Contingency Plan and Emergency Procedures - Used oil processors and re-refiner facilities must also create a contingency plan designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water. This plan is very similar to the contingency plan required for large quantity generators of hazardous waste.

➤ Analysis Plan - Used oil processors and re-refiner facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of the Rebuttable Presumption Rule and, if applicable, the on-specification used oil fuel determination. The owner or operator must keep the plan at the facility. At a minimum, the plan must specify whether sample analyses or knowledge of the halogen content of the used oil will be used to make the hazardous waste determination, the sampling method used to obtain representative samples to be analyzed, the frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site.

Off-Specification Used Oil Fuel Burners

A used oil burner is a facility where used oil not meeting the specification requirements in ADEM Admin Code r. 335-14-17-.02(2) is burned for energy recovery in an industrial furnace, boiler, or hazardous waste incinerator. Used oil burners must comply with ADEM Admin Code r. 335-14-17-.07.

Used Oil Fuel Marketers

A used oil fuel marketer is any person who either directs a shipment of off-specification used oil from their facility to a used oil burner, or first claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in ADEM Admin. Code r. 335-14-17-.02(2). Used oil marketers must comply with ADEM Admin. Code r. 335-14-17-.08.

Frequently Asked Questions

Q

Is a permit required to haul used oil from one site to another within the facility?

A

No. The management standards for used oil transporters do not apply to on-site transportation. However, any used oil in excess of 55 gallons that is to be transported off-site, should only be transported by a permitted transporter.

Is All Used Oil Regulated By The Used Oil Management Standards?

Only used oil that is intended to be recycled is regulated under the used oil management standards of ADEM Admin. Code Ch. 335-14-17 (40 CFR 279). The used oil management standards assume that all materials meeting the definition of used oil are destined for recycling until the materials are actually disposed of or are sent for disposal.

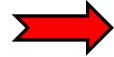
Used oil that is disposed of or used in a manner constituting disposal is not regulated under the used oil management standards, but is instead classified as a solid waste by ADEM Admin. Code Ch. 335-14-2 (40 CFR, Part 261) and by r. 335-14-17-.09. A person who generates a solid waste must determine if that waste is a hazardous waste pursuant to ADEM Admin. Code r. 335-14-3-.01(2) (40 CFR 262.11). Used oil that is disposed of or used in a manner constituting disposal is fully regulated as a hazardous waste under the ADEM Administrative Code, Division 14, if it exhibits any of the characteristics of a hazardous waste or has been mixed with a hazardous waste.

Chapter 3 – What Are The Notification Requirements?

- Used oil generators that generate an average of greater than 25 gallons of used oil per month in a calendar year must obtain an EPA Identification Number prior to generating used oil.
- Used oil transporters must obtain an EPA Identification Number prior to transporting used oil.
- Used oil processors and re-refiners must obtain an EPA Identification Number prior to processing/re-refining used oil.
- Used oil burners who burn off-specification used oil for energy recovery must obtain an EPA Identification Number prior to the burning of used oil.

Mechanics of Notification:

A used oil facility must submit a correct and complete ADEM Form 8700-12 (including all appropriate attachment pages and fees) reflecting current used oil activities to the Department annually according to the following schedule. The Department must receive the ADEM Form 8700-12, Notification of Regulated Waste Activity, (including all appropriate attachment pages and fees) no later than the 15th day of the specified month.

If Your Facility Is Located In The County Of...	Submit Form 8700-12 By The 15 th Of...
Colbert, Fayette, Franklin, Greene, Hale, Lamar, Lauderdale, Lawrence, Limestone, Marion, Morgan, Pickens, Sumter, Tuscaloosa, Walker, Winston	February 
Blount, Cherokee, Cullman, DeKalb, Etowah, Jackson, Madison, Marshall, St. Clair	April 
Jefferson	June 
Calhoun, Chambers, Clay, Cleburne, Coosa, Elmore, Lee, Macon, Montgomery, Randolph, Shelby, Talladega, Tallapoosa	August 
Autauga, Baldwin, Barbour, Bibb, Bullock, Butler, Chilton, Choctaw, Clarke, Coffee, Conecuh, Covington, Crenshaw, Dale, Dallas, Escambia, Geneva, Henry, Houston, Lowndes, Marengo, Monroe, Perry, Pike, Russell, Washington, Wilcox	October 
Mobile	December 

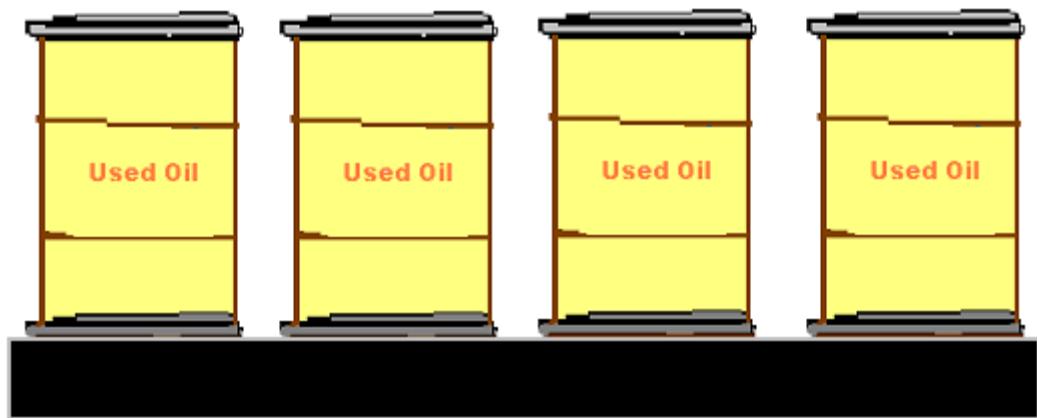
The submitted ADEM Form 8700-12 is not considered complete without payment of all applicable fees and a cover letter. The letter must include the following:

1. Type of activity/activities generating the used oil (or for transporters, the type of transport activity);
2. The approximate volume of used oil typically generated per year;
3. The location of all aggregation points (or for transporters, transfer facilities) at which oil is stored;
4. The name and telephone number for a contact at each aggregation point (or for transporters, at each transfer facility).

Chapter 4 - What Are The Requirements For Used Oil Storage?

Used oil should only be stored in tanks, containers, or units regulated under ADEM Admin. Code ch. 335-14-5 or 335-14-6. Containers must always be maintained in the following manner:

- ◆ Used oil storage containers must be free of leaks, and maintained in good condition.
- ◆ Used oil containers must always be closed except when necessary to add or remove used oil.
- ◆ Used oil storage containers and aboveground storage tanks must be labeled with the words “Used Oil” and the label must be legible from 25 feet.
- ◆ Fill pipes used to transfer used oil into underground tanks must be labeled with the words “Used Oil.”
- ◆ Containers and tanks used to store used oil at transfer facilities must be equipped with secondary containment that meets the requirements of ADEM Admin. Code rs. 335-14-17-.05(7)(e-g).
- ◆ The generator must use appropriate controls to prevent spills and overflows from used oil storage tanks. These include, but are not limited to:
 - Spill prevention controls in the form of check valves, dry disconnect couplings, or similar devices;
 - Overflow controls for continuously fed used oil tanks in the form of level sensing devices, high level alarms, etc.;
 - Freeboard controls in open used oil tanks; or
 - Direct observation by persons adding used oil to tank.

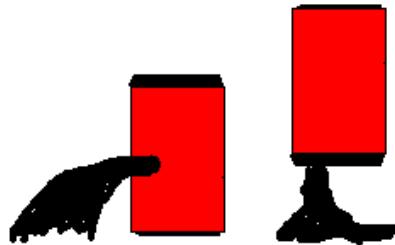


Used oil containers must be labeled and in good condition.

How Do I Manage Used Oil Filters?

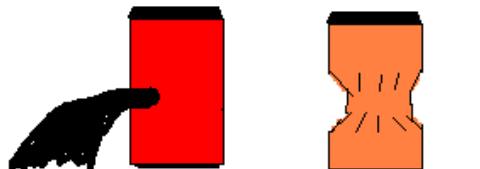
ADEM Admin. Code r. 335-14-2-.01(4)(b)13. exempts non-terne plated used oil filters that are not mixed with a listed waste from the definition of a hazardous waste if these oil filters have been gravity hot-drained using one of the following methods:

1. **Puncture the filter anti-drain back valve or the filter dome end and hot-drain;**



Puncturing and hot-draining

2. **Hot-drain and crush;**



Hot-draining and crushing

3. **Dismantle and hot-drain; or**



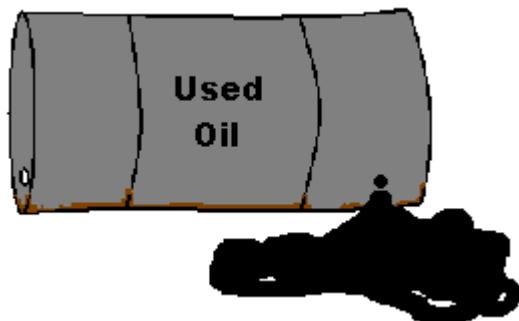
Dismantling and hot-draining

4. **Any other equivalent hot-draining method which will remove the free-flowing used oil.**

In other words, used oil filters that are gravity hot drained (as described above) are exempted from the definition of a hazardous waste and RCRA regulation if they are destined to be recycled for their metal content (managed as scrap metal).

Oops! What is the proper way to clean up a used oil spill?

Upon detection of a used oil release that is not subject to the corrective action requirements of Division 335-6, Volume 2 of the ADEM Administrative Code, a facility must stop the release, contain the released used oil, clean up and properly manage the released used oil in accordance with all applicable regulations of ADEM Admin. Code Division 13 and 14 and repair or replace any leaking containers or tanks.



**Used Oil spills need to be stopped, contained, and cleaned up.
Don't forget to repair the source of the leak.**

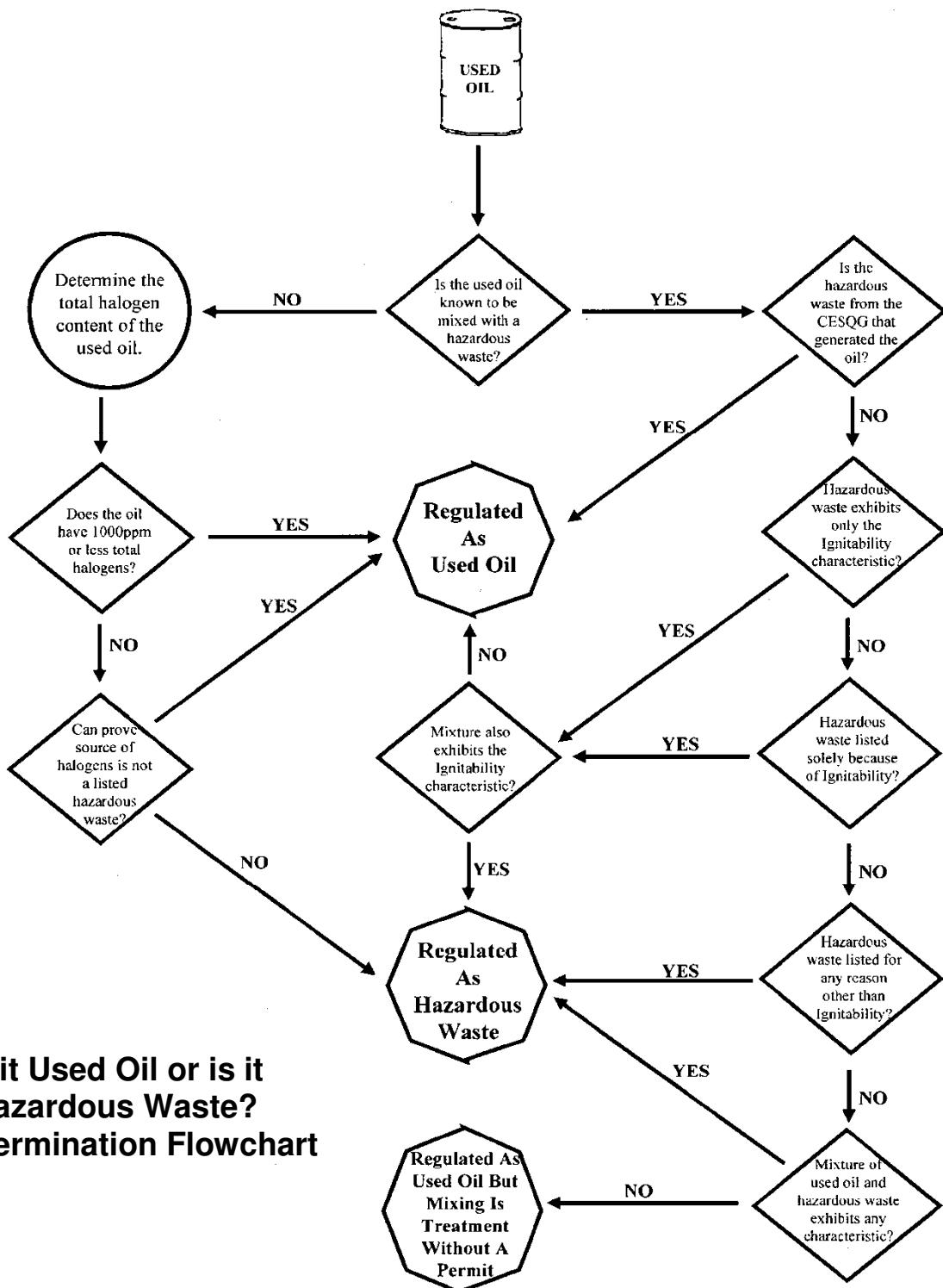
Frequently Asked Questions

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Is secondary containment necessary when storing Used Oil?

A

Secondary containment is not required for Used Oil Generators but is required for Transporters, Transfer Facilities, Processors, Re-refiners, and Burners of Off-Specification Used Oil Fuel.



The used oil flowchart is intended to assist used oil handlers in determining whether a particular lot of used oil is regulated under the used oil management standards of ADEM Admin. Code Ch. 335-14-17 or the hazardous waste regulations of ADEM Admin. Code ch. 335-14-1 to 335-14-9. The flowchart was created as a general guideline to make the used oil/hazardous waste determination easier. It is not intended as a substitute for a thorough knowledge or understanding of the Division 14 regulations.

Chapter 5 - Do The Hazardous Waste Regulations Apply To Used Oil?

ADEM Admin. Code r. 335-14-17-.02(1)(a) states that used oil is regulated as recyclable used oil under the used oil management standards, even if the used oil exhibits a characteristic of hazardous waste identified in ADEM Admin. Code r. 335-14-2-.03. However, used oil can become a hazardous waste under two general circumstances: the used oil is sent for disposal rather than recycling, or the used oil is mixed with a hazardous waste.

Used Oil Sent For Disposal

Used oil that is sent for disposal rather than recycling is a solid waste that undergoes the same solid/hazardous waste determination as any other solid waste (see ADEM Admin. Code Ch. 335-14-2). If the used oil sent for disposal exhibits one of the characteristics of a hazardous waste, then it must be disposed of as a hazardous waste. If the used oil sent for disposal is not a hazardous waste, then ADEM's Solid Waste Program regulates such disposal. ADEM Admin. Code r. 335-13-4-.26(4) describes the regulations that apply to non-hazardous used oil that is unintentionally disposed of on the land or in landfills.

Used Oil Mixed With Hazardous Waste

Accidental or intentional mixing of used oil and hazardous waste is the most common way that used oil becomes a hazardous waste. The exact regulatory status of the mixture of used oil and hazardous waste depends on the type of hazardous waste mixed with the used oil:

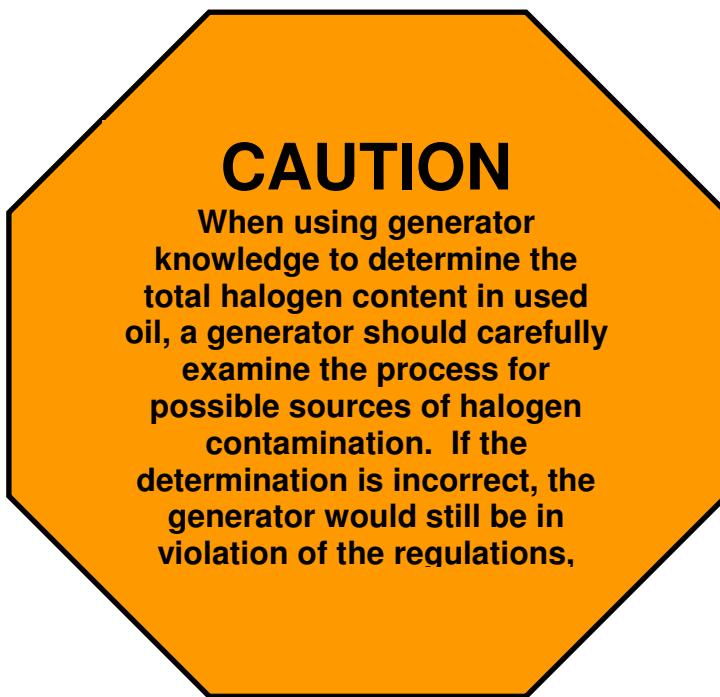
- ADEM Admin. Code r. 335-14-17-.02(1)(b)2. requires mixtures of characteristic hazardous waste and used oil to be regulated as a hazardous waste if the mixture exhibits any characteristic of a hazardous waste.
- ADEM Admin. Code r. 335-14-17-.02(1)(b)1. requires mixtures of used oil and listed hazardous waste to be regulated as hazardous waste.

The regulations do make one exception to the rules concerning the mixing of hazardous waste and used oil. ADEM Admin code r. 335-14-17-.02(1)(b)3. allows mixtures of conditionally exempt small quantity generator waste and used oil to be regulated as used oil. However, mixing used oil and hazardous waste may create unnecessary problems for conditionally exempt small quantity generators. Some used oil transporters will not accept any used oil mixed with hazardous waste, mainly because it creates serious bookkeeping problems for the transporter. In addition, the end user of the oil (the burner or re-refiner that buys the oil) may not be able to use the oil if it contains hazardous waste constituents.

Chapter 6 - How Do I Prove That My Used Oil Is Not A Hazardous Waste?

Used oil regulated under the used oil management standards undergoes a less strict hazardous waste determination known as the **Rebuttable Presumption Rule**.

To make the Rebuttable Presumption determination, first determine the level of total halogens in the used oil. A used oil handler may determine the level of total halogens in one of two ways:



Analysis - There are several EPA-approved test methods that can be used to determine the level of total halogens in used oil, but the easiest are the Clor-D-Tect field test kits (Method 9077). These test kits contain everything needed to perform the test and the results are available in just a few minutes.

Generator Knowledge - A generator may use his knowledge of the processes that produced the used oil to determine the level of total halogens in the oil. **However, only the original generator of the oil may use generator knowledge to make the halogen content determination.**

Subsequent handlers of oil (i.e. transporters, processors, burners, etc.) may rely upon the original generator's determination, but would not be able to make a determination based on generator knowledge because they would not have all the information necessary to make such a determination.

- **If the level of total halogens in the used oil is less than 1000 parts per million**, the used oil is regulated as used oil.
- **If the level of total halogens in the used oil is greater than 1000 parts per million**, the used oil is presumed to be a hazardous waste because it has been mixed with a halogenated hazardous waste listed in ADEM Admin. Code r. 335-14-2-04. Unless the handler of the used oil can demonstrate that the used oil was not mixed with a hazardous waste, then the used oil must be handled as a hazardous waste. To rebut this presumption, a handler can demonstrate that the used oil does not

contain significant concentrations of the listed halogenated hazardous constituents. This can be achieved in one of two ways:

Analysis- Generally, if used oil does not contain over 1000 ppm total of the halogenated hazardous constituents listed in ADEM Admin. Code r. 335-14-2-04, then it passes the Rebuttable Presumption determination and is regulated as used oil.

Generator Knowledge- If the generator can demonstrate that the halogen contamination comes from a source other than a halogenated hazardous waste listed in ADEM Admin. Code r. 335-14-2-04, then the used oil passes the Rebuttable Presumption determination and is regulated as used oil. Remember, only the original generator can make a claim of generator knowledge.

Frequently Asked Questions

Q Do the management standards in ADEM Admin. Code ch. 335-14-17 pertain to facilities that are sending used oil for disposal?

A No. The Department presumes that used oil is to be recycled unless a used oil handler disposed of used oil, or sends used oil for disposal. ADEM Admin. Code Ch. 335-14-17 management standards apply to used oil until a facility disposes of the used oil or sends it for disposal. If the used oil is to be disposed, a used oil handler would have to make a waste determination outlined in ADEM Admin. Code Ch. 335-14-3. Used oil that has been mixed with a listed hazardous waste or that exhibits a characteristic of hazardous waste must be managed as a hazardous waste under the hazardous waste regulations of ADEM Admin. Code ch. 335-14-1 to 335-14-9 when it is disposed or sent for disposal. Conversely, used oil that is not hazardous must be managed as a solid waste under Division 13 of the ADEM Admin. Code if disposed on-site or off site.

Q Are conditionally exempt small quantity generators (CESQGs) of hazardous waste exempt from the used oil management standards in ADEM Admin. Code. Ch. 335-14-17?

A ADEM Admin. Code Ch. 335-14-17 does not contain an exemption for any class of generators based on used oil generation rate. As a result, all used oil generators producing used oil through commercial or industrial operations and vehicle services are subject to the same uniform standards. Only the individuals listed in ADEM Admin. Code rs. 335-14-17-.03(1)(a)1-4 are exempt from the generator requirements

Chapter 7 - How Are Mixtures Of Used Oil And Other Materials Regulated?

Materials containing or otherwise contaminated with used oil:

Except when burned for energy recovery, materials containing or otherwise contaminated with used oil are not subject to regulation as used oil provided the used oil has been properly drained or removed to the extent possible. No visible signs of free-flowing used oil should remain in or on the material. If the remaining materials are a solid waste, then they are subject to a hazardous waste determination and regulation as hazardous waste if they display a characteristic of hazardous waste or are mixed with a hazardous waste listed in ADEM Admin. Code r. 335-14-2-04. If the materials are not a hazardous waste and are disposed of, then they are subject to Division 13 regulations.

Materials derived from used oil:

- * Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery are not used oil or a solid waste and are therefore not subject to regulation as a used oil or as a hazardous waste.
- * Materials that are produced from used oil and are burned for energy recovery are subject to regulation as used oil.
- * Materials derived from used oil that are disposed of or are used in a manner constituting disposal are solid wastes and are therefore subject to a hazardous waste determination.
- * Re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to regulation as used oil or as a hazardous waste at this time.

Wastewater:

Wastewaters, the discharge of which are subject to either Section 402 or Section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to regulation as used oil.

Mixtures of used oil with products:

Mixtures of used oil with products are subject to regulation as used oil, except for mixtures of used oil and diesel fuel mixed onsite by the generator of the used oil for use in the generator's own vehicles once the used oil and diesel fuel have been mixed.

PCB Contaminated used oil:

Used oil containing quantifiable levels of PCBs (2 ppm or greater) are subject to regulation under 40 CFR 761.20(e), as well as regulation as used oil.

Used oil introduced into crude oil pipelines or a petroleum refining facility:

- * Used oil mixed with crude oil or natural gas liquids for insertion into a crude oil pipeline is only subject to regulation before mixing.
- * Mixtures of less than 1% used oil and crude oil or natural gas liquids that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the process before crude distillation or catalytic cracking are not regulated as used oil.
- * Used oil inserted into the petroleum refining process before catalytic cracking or crude distillation is not regulated as used oil provided the used oil constitutes less than 1% of the crude oil feed to any petroleum refining process unit at any given time.
- * Except as provided below, used oil that is introduced into a petroleum refining process after crude distillation or catalytic cracking is regulated as used oil unless it meets the specifications of ADEM Admin. Code r. 335-14-17-02(2).
- * Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine operations at a petroleum refining facility and inserted into the petroleum refining process at any point is not regulated as used oil.
- * Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are not regulated as used oil.

Used Oil Restrictions

- ◆ Used oil may not be stored in surface impoundments or waste piles unless they are subject to regulation under ADEM Admin. Code ch. 335-14-5 or 335-14-6.
- ◆ Used oil may not be used as a dust suppressant.
- ◆ Used oil fuel that exceeds any specification level is termed "off-specification" used oil fuel. Off-specification used oil may be burned for energy recovery only in the following units:
 - Industrial furnaces identified in ADEM Admin. Code r. 335-14-1-.02(1);
 - Hazardous waste incinerators subject to regulation under ADEM Admin Code rs. 335-14-5-.15 and 335-14-6-.15;
 - Used oil-fired space heaters provided that the burner meets the provisions of ADEM Admin. Code r. 335-14-17-.03(5).
 - Boilers, as defined in ADEM Admin. Code r. 335-14-1-.02(1), that are identified as follows:
 - ❖ Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;
 - ❖ Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale.

Chapter 8 - What are the Used Oil Specifications?

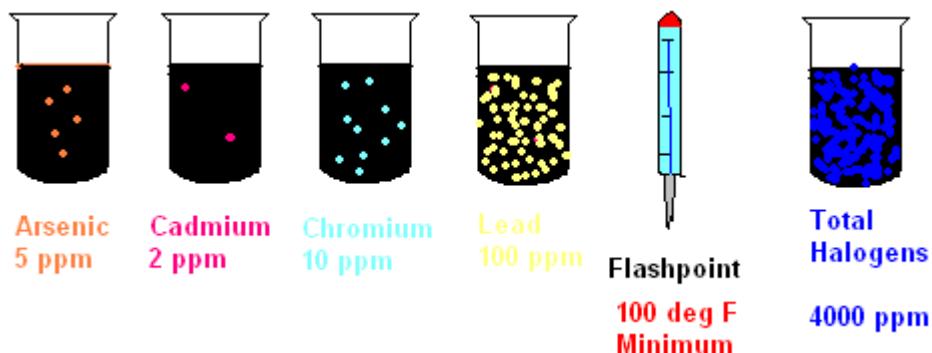
The specification determination only applies to used oil fuels, which are going to be burned for energy recovery and not to used oil that is to be recycled or to used oil destined for disposal. Used oil to be burned for energy recovery and any fuel produced from used oil by used oil processing, blending, or other treatment is subject to the used oil management standards unless it is found not to exceed any of the allowable levels of the constituents and properties listed below. Once used oil to be burned for energy recovery has been shown not to exceed any specification and it complies with ADEM Admin. Code rs. 335-14-17-.08(3), (4), and (5)(b), the used oil is no longer subject to ADEM Admin. Code Ch. 335-14-17. Used oil fuel that exceeds any specification level is termed "off-specification" used oil fuel.

Used Oil Fuel Specification Levels

Constituent/Property	Maximum Allowable Level
Arsenic ¹	5 ppm
Cadmium ¹	2 ppm
Chromium ¹	10 ppm
Lead ¹	100 ppm
Flash Point	100 ⁰ F minimum
Total Halogens ¹	4000 ppm

¹These figures are based on testing for totals, not TCLP.

A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of ADEM Admin. Code r. 335-14-17-.02(2). The person that makes the specification determination on used oil fuel becomes subject to the marketer standards found in ADEM Admin. Code r. 335-14-17-.08.



Chapter 9 - How Are Used Oil Collection Centers And Aggregation Points Regulated?

I. Do-it-yourself (DIY) used oil collection centers: A DIY used oil collection center is any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourself generators. Owners or operators of such facilities must comply with the used oil generator standards found in ADEM Admin. Code r. 335-14-17-03.

II. Used oil collection centers: A used oil collection center is any site or facility that accept/aggregates and stores used oil collected from generators regulated under ADEM Admin. Code r. 335-14-17-03 who bring used oil to the collection center in shipments of no more than 55 gallons. Used oil collection centers may also accept used oil from household DIY generators. Owners or operators of such facilities must comply with the used oil generator standards found in ADEM Admin. Code r. 335-14-17-03.

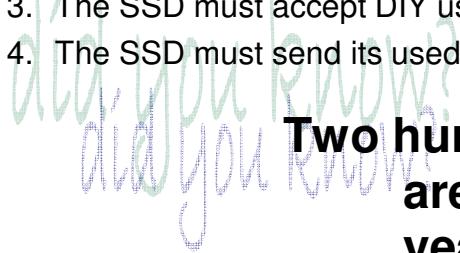


Used Oil collection centers can accept no more than 55-gallons of used oil at one time from a Used Oil generator.

III. Used oil aggregation points owned by the used oil generator: A used oil aggregation point is any site or facility that accepts, aggregates and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household DIY generators. Owners or operators of such facilities must comply with the used oil generator standards found in ADEM Admin. Code r. 335-14-17-03.

IV. Liability exemption - Service Station Dealers (SSD), as defined by CERCLA section 101(37), will become eligible for the exemption from generator liability under section 107(a)(3) of CERCLA and transporter liability under section 107(a)(4) if the service station meets the following requirements:

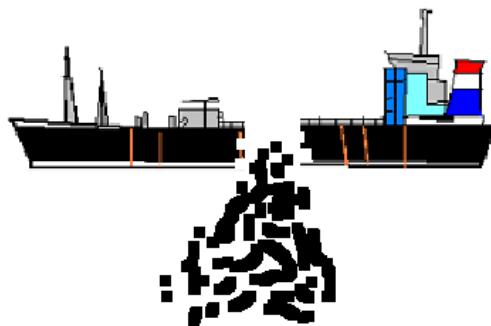
1. The SSD must be in compliance with the used oil management standards given above;
2. The used oil must not be mixed with any other hazardous substance;
3. The SSD must accept DIY used oil;
4. The SSD must send its used oil and any DIY used oil accepted to a recycler.



Two hundred million gallons of used oil are improperly disposed of each year.

Chapter 10 - Used Oil as a Resource

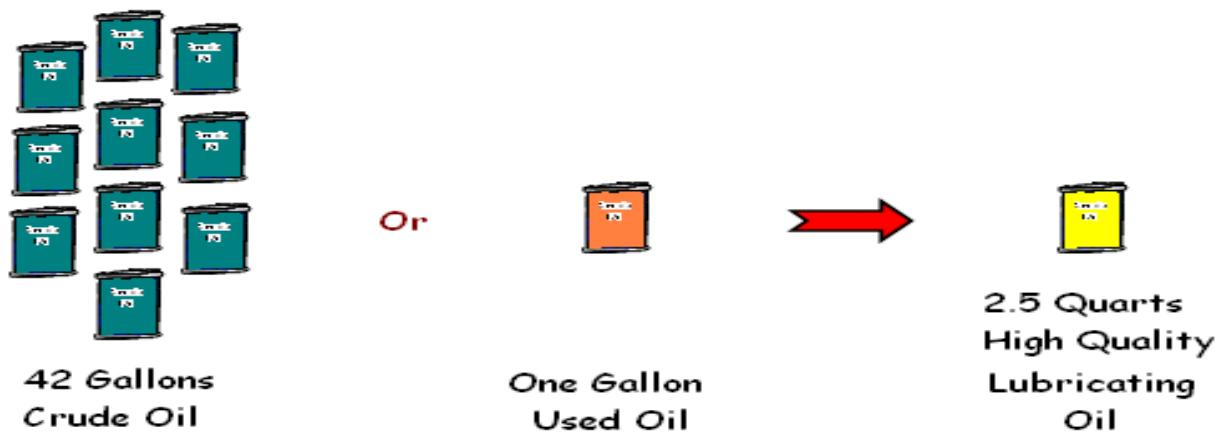
When properly managed and recycled, used oil is a valuable energy resource. Used oil can be recycled into a number of different products. The American Petroleum Institute estimated in 1996 that the amount of used lube oil released onto the land each year in the United States equals 25 times the amount of oil spilled by the Exxon Valdez tanker in Alaska. Recovering used oil is desirable for protection of human health and the environment.



Used oil released every year is equal to 25 times that released by the Exxon Valdez tanker

Re-refining Used Oil

Re-refining used oil produces high-quality base stock, which is used for lubricants or other petroleum products. It takes **42 gallons** of crude oil to produce 2.5 quarts of lubricating oil; the same amount of lubricating oil can be produced from only **1 gallon** of used oil.



It takes 42 gallons of crude oil, but only 1 gallon of used oil, to produce 2.5 quarts of new, high-quality lubricating oil.

Re-refining versus Processing

Re-refining is not the same as processing. The major difference is that re-refined oil has sufficient quality to be used again as lubricating oil. By contrast, processing produces a used oil of lower quality, which can be used as a fuel for producing electricity or other purposes. Processed used oil can also be blended for marine fuel or other use. It can even be mixed with asphalts.

What Can Be Made from Re-refined Used Oil?

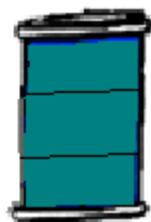
Once used oil has been re-refined into base stock, it is sent to packagers for mixing with additives. Several hundred products – such as automotive oil, industrial oil, lubricants, and industrial fuels – are produced from base stock. The waste byproducts and residual oil from the re-refining process can be used as asphalt extender. Another product that can be made from such used oil is called “chain oil,” a low-grade oil for lubrication.



Industrial Oil



Automotive Oil



Lubricating Oil

Some of the products that can be re-refined from used oil.

Burning Used Oil for Energy Recovery

Some used oil is recycled for use as a fuel oil rather than for re-refining. Several types of fuel oils are produced from used oil, including bunker fuel (used in ships) and supplementary fuel in cement kilns. Used oil is also burned for its heating value in asphalt plants to dry the sand in the aggregate. When used oil is received at a processing plant, water and solids are extracted as much as possible. In some cases, used oil is blended with a residual oil (for example, number 6 fuel oil) to adjust the viscosity and flash point so that it can be used for its heating value. The ratio for blending is approximately 75 percent used oil and 25 percent residual oil. However, this ratio depends on the type of fuel that the customer is requesting.



Used Oil can be burned for its heating value.

Chapter 11 - Useful Federal Register Notices

July 30, 2003 - Final Rule

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Recycled Used Oil Management Standards (68 FR 44659-44665)

July 14, 1998 – Removal of Direct Final Rule

Removal of Three Revisions Made in the May 6, 1998 Direct Final Rule (63 FR 37780-37782)

May 6, 1998 – Direct Final Rule

Revised Requirements on Polychlorinated Biphenyls and Used Oil (63 FR 24963-24969)

March 4, 1994 – Final Rule

Clarification of Refinery Exemptions, Used Oil Generator Activities That Are Not Considered Processing And Other Topics (50 FR 10550-10560)

June 17, 1993 – Technical Correction Notice

Correction Regarding the Used Oil Notification Requirements (58 FR 33341-33342)

May 3, 1993 – Technical Correction Notice

Correction Regarding Part 279 Enforceability and Other Topics (58 FR 26420-26426)

March 23, 1993 – Revised Final Rule

Revised Requirements on Polychlorinated Biphenyls and Used Oil (58 FR 15435-15436)

September 10, 1992 – Final Rule

Final Used Oil Management Standards (57 FR 41566-41626)

May 20, 1992 – Final Rule

Decision Not to List Used Oil as a Hazardous Waste and Non-terne Plated Used Oil Filter Exemption (57 FR 21524-21534)

September, 23 1991 – Supplemental Notice of Proposed Rulemaking

Availability of Additional Used Oil Composition Data and Additional Information on the November 29, 1985, Proposed Management Standards (56 FR 48000-48074)

June 27, 1988 – Final Rule

Polychlorinated Biphenyls and Used Oil (53 FR 24206-24221)

November 29, 1985 – Final Rule

Final Rule Providing Controls for Used Oil Marketing and Burning for Energy Recovery (50 FR 49164-49270)

Contact Information

For further information concerning management of used oil, contact ADEM's Land Division at (334) 271-7730 or via email at landmail@adem.state.al.us .

Chapter 12 - Test Methods For Determining Halogen Content Of Used Oil

METHOD NUMBER		PROCEDURE
TOTAL HALOGENS		
Method 9075		XRF Spectrometry
Method 9076		Oxidative combustion and microcoulometry
Method 9077		Clor-D-Tect 1000 Quanti-Clor Kit Clor-D-Tect Q4000
INDIVIDUAL HALOGENS		
Method 8021		GC/HECD Capillary column technique
Method 8010A		Packed column method

REQUIREMENT	Generators 335-14-17-.03	Transporters and Transfer Facilities 335-14-17-.05	Processors and Re-refiners 335-14-17-.06	Burners of Off-Specification Used Oil Fuel 335-14-17-.07	Marketers 335-14-17-.08
Identification Number	Required if the used oil generator generates a monthly average of 25 gallons or more.	Must obtain an EPA ID number and an AHWMA Used Oil Transporter Permit prior to first transporting used oil.	Must obtain an EPA ID number prior to first processing used oil.	Must obtain an EPA ID number prior to first burning off-spec used oil fuel. ¹	Must obtain an EPA ID number prior to first marketing used oil fuel.
Hazardous Waste Determination	Rebuttable Presumption	Rebuttable Presumption	Rebuttable Presumption	Rebuttable Presumption	Not Applicable ²

REQUIREMENT	Generators 335-14-17-03	Transporters and Transfer Facilities 335-14-17-05	Processors and Re-refiners 335-14-17-06	Burners of Off-Specification Used Oil Fuel 335-14-17-07	Marketers 335-14-17-08
Storage	<p>Used oil must be stored in containers, tanks, or units that are regulated under ADEM Admin. Code Chs. 335-14-5 or 6.</p> <p>Containers must always be closed except when necessary to add or remove used oil.</p> <p>Controls and practices to prevent spills and overflows from tanks must be used.</p> <p>Units used to store used oil must be in good condition and have no visible leaks.</p> <p>Aboveground tanks, containers, and UST fill pipes must be labeled "Used Oil."</p>	<p>Used oil must be stored in containers, tanks, or units that are regulated under ADEM Admin. Code Chs. 335-14-5 or 6.</p> <p>Containers must always be closed except when necessary to add or remove used oil.</p> <p>Controls and practices to prevent spills and overflows from tanks must be used.</p> <p>Units used to store used oil must be in good condition and have no visible leaks.</p> <p>Aboveground tanks, containers, and UST fill pipes must be labeled "Used Oil."</p> <p>Must comply with NFPA's "Flammable and Combustible Liquids Code", if applicable.</p>	Same as the storage requirement for Transporters and Transfer Facilities.	Same as the storage requirement for Transporters and Transfer Facilities.	Not Applicable ²
Secondary Containment	Not Required	<p>Containers used to store used oil must be equipped with a secondary containment system. The system must consist of, at a minimum, dikes, berms or retaining walls; a floor; or an equivalent secondary containment system.</p> <p>The volume of a tank storage containment system must be large enough to hold 100% of the volume of the largest tank in its boundary.</p> <p>The containment system must be designed and operated to prevent entrance and or presence of sufficient run-on, precipitation, or leaked material to endanger the system's capacity.</p>	Same as the secondary containment requirement for Transporters and Transfer Facilities.	Same as the secondary containment requirement for Transporters and Transfer Facilities.	Not Applicable ²

REQUIREMENT	Generators 335-14-17-03	Transporters and Transfer Facilities 335-14-17-05	Processors and Re-refiners 335-14-17-06	Burners of Off-Specification Used Oil Fuel 335-14-17-07	Marketers 335-14-17-08
Closure	Not Required	<p>Remove or decontaminate used oil residues in tanks and/or remove any containers holding used oil or used oil residues.</p> <p>Remove or decontaminate contaminated containment system components, soils, structures, and equipment. If all contaminated soil from a tank system cannot be removed or decontaminated, then must close in accordance with ADEM Admin. Code r. 335-14-6-.14(11).</p>	Same as the closure requirements for Transporters and Transfer Facilities.	Not Required	Not Applicable ²
Off-Site Transportation	<p>Must use only transporters who have obtained an EPA ID number.</p> <p>May self-transport up to 55 gallons in own vehicle to a registered collection center or an aggregation point owned by the generator.</p> <p>May arrange for used oil to be transported by a transporter without an EPA ID number if the used oil is reclaimed under a tolling agreement and is transported only in a vehicle owned by the processor reclaiming the oil.</p>	<p>Must deliver used oil only to another used oil transporter, a used oil processor, or an off-specification used oil burner with an EPA ID number or an on-specification used oil burner.</p> <p>Must comply with all applicable DOT requirements in 49 CFR 171-180.</p>	<p>Must use only transporters who have obtained an EPA ID number.</p>	Not Applicable	Not Applicable ²

REQUIREMENT	Generators 335-14-17-03	Transporters and Transfer Facilities 335-14-17-05	Processors and Re-refiners 335-14-17-06	Burners of Off-Specification Used Oil Fuel 335-14-17-07	Marketers 335-14-17-08
Shipment Tracking	Not Required <i>The Department strongly recommends that used oil generators keep a log of used oil shipments that records the name and EPA ID number of the transporter, the date of the shipment, and the quantity of used oil shipped.</i>	<p>A record of each used oil pickup by the transporter, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the facility that provided the used oil for shipment; 2) The quantity of used oil provided for shipment; 3) The date of acceptance of the used oil for shipment; and 4) The signature, dated on acceptance of the used oil for shipment, of a representative of the facility that provided the used oil for shipment. <p>A record of each used oil shipment delivered, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the facility that received the used oil shipment; 2) The quantity of used oil delivered; 3) The date of delivery of the shipment; and 4) The signature, dated on delivery of the shipment, of a representative of the facility that accepted the used oil. 	<p>A record of each used oil shipment accepted by the processor, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the transporter that delivered the shipment; 2) The name, address, and EPA ID number of the facility that originally provided the used oil for shipment; 3) The quantity of used oil accepted; and 4) The date of acceptance of the used oil. <p>A record of each used oil shipment from the facility, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the transporter used to make the shipment; 2) The name, address, and EPA ID number of the destination facility for the shipment; 3) The quantity of used oil shipped; and 4) The date of the shipment. 	<p>A record of each used oil shipment, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the transporter that delivers the used oil fuel; 2) The name, address, and EPA ID number of the facility that provided the used oil fuel for shipment; 3) The quantity of used oil fuel accepted; and 4) The date of acceptance of the used oil fuel. 	<p>A record of each off-specification used oil fuel shipment, including:</p> <ol style="list-style-type: none"> 1) The name, address, and EPA ID number of the transporter that accepts the used oil fuel for delivery; 2) The name address, and EPA ID number of the destination facility for the shipment; 3) The quantity of used oil fuel shipped; and 4) The date the used oil fuel was shipped. <p>A record of each on-specification used oil fuel shipment, including:</p> <ol style="list-style-type: none"> 1) The name and address of the facility the shipment of used oil fuel is directed to; 2) The quantity of used oil fuel in the shipment; 3) The date of the used oil fuel shipment; 4) A cross-reference to the analysis or other information used to make the on-spec determination.

REQUIREMENT	Generators 335-14-17-03	Transporters and Transfer Facilities 335-14-17-05	Processors and Re-refiners 335-14-17-06	Burners of Off-Specification Used Oil Fuel 335-14-17-07	Marketers 335-14-17-08
Additional Recordkeeping	Not Required	Records of analysis conducted or other information used to make the hazardous waste determination.	Records of analysis conducted or other information used to make the hazardous waste determination. Summary reports and details of each incident requiring implementation of the processors contingency plan.	Records of analysis conducted or other information used to make the hazardous waste determination. Copies of certifications provided to marketers. These certifications must be maintained for three years after the date of the receipt of the last shipment of used oil from the marketer.	Records of analysis conducted or other information used to make the hazardous waste determination. Records of analysis conducted or other information used to make the on-specification determination. Copies of certifications received from off-spec used oil fuel burners. These certifications must be maintained for three years after the date of providing the last shipment of used oil to the burner.
Reporting and Certification	Not Required	Report to the Department each even-numbered year the following information from the previous calendar year: 1) The transporter's name, address, and EPA ID number; 2) The calendar year covered by the report; 3) The total quantity of used oil accepted for transport, the facilities to which the oil was transported, and the quantity delivered to each; and 4) The approximate percentage of used oil transported that was derived from DIY sources.	Report to the Department each even-numbered year the following information from the previous calendar year: 1) The processor's name, address, and EPA ID number; 2) The calendar year covered by the report; 3) The total quantity of used oil accepted for processing and the manner in which it was processed.	Provide to the marketer a one-time certification that the off-spec burner has notified the Department of his used oil activity and will only burn off-spec used oil fuel in a boiler or industrial furnace. Must provide the certification statement prior to receiving the first shipment of off-spec used oil from the marketer.	Receive from off-spec used oil fuel burners a one-time certification that the off-spec burner has notified the Department of his used oil activity and will only burn off-spec used oil fuel in a boiler or industrial furnace. Must receive the certification statement prior to shipping the first shipment of off-spec used oil fuel to the burner.

1 – While ADEM Admin. Code r. 335-14-17-07 does not require a burner of off-specification used oil fuel to re-notify if he has already notified due to his hazardous waste activities, ADEM Admin. Code r. 335-14-17-07(7) requires the burner to provide a certification to a marketer that he has notified the Department of his used oil activity.

2 – Because of the definition of “marketer”, a facility is seldom just a marketer. While ADEM Admin. Code r. 335-14-17-08 does not require a marketer to comply with this standard; the marketer may still be required to comply with the standard due to his other used oil activities (i.e., generation, transportation, processing, etc.).

3 – Facilities that store used oil may also be subject to the Spill Prevention, Control, and Countermeasures (ADEM Administrative Code, Division 6, Volume 1) and Underground Storage Tank (ADEM Administrative Code, Division 6, Volume 2) standards, as well as the Division 14 regulations.

4 – Unless specifically stated otherwise, all records must be kept for three years from the date of the record's creation.

