

## Recyclable Materials: Used oil

### Contents

- Used oil definition
- Used oil management standards
- Mixtures of used oil with other materials
- Characterization of used oil - 40 CFR 279.10
- Used oil fuel specifications
- Off-specification oil management
- On-site used oil storage
- Used oil filters - 40 CFR Part 261.4(b)(13)
- Space heaters - 40 CFR Part 279.23
- "DIY" household used oil

Virginia has adopted 40 CFR Part 279 used oil management standards from the federal regulations, by reference.

### I. Used oil definition

Any oil that has been refined from crude oil or any synthetic oil that is used, and as a result of such use, is contaminated by physical or chemical impurities. In general, this includes engine crankcase oil, machine lubricating oil, cutting oil, hydraulic oil, heat treating oil, and compressor oil. "Waste oil" is not the same as used oil.

### II. Used oil management standards are based on the recycling presumption

The RCRA Part 279 standards established for used oil management operate under the presumption that used oil will be recycled. Therefore, the Part 279 standards apply unless the used oil is managed or disposed of inconsistent with Part 279 requirements, at which point the generator must assess the oil for HW characteristics.

"Used Oil" may be conditionally excluded from regulation as HW under 40 CFR Part 261.6(a)(4) when recycled:

"recycled = reused = re-refined, reclaimed, burned for energy recovery, reprocessed"

"conditionally excluded" means that it is not subject to full regulation as a hazardous waste only if it is managed under certain conditions established in Part 279

**Disposal of non-hazardous used oils** - used oil that is not HW, but cannot be managed for recycling under Part 279, must be managed in accordance with 40 CFR Parts 257 and 258.

**Dust Suppressant** - Used oil use as a dust suppressant is strictly prohibited in Virginia!

### III. Mixtures of used oil with other materials

- Mixtures of used oil and fuels or other fuel products may be managed under the used oil regulations
- Warning: This may result in the oil being "off specification," particularly if mixed with gasoline. It is generally safe for diesel, kerosene, heavy oil and grease, etc.

- Oily wastewater - If contaminated with de minimis amounts of oil and managed in units regulated under CWA 307 or 402, oily wastewaters are not subject to Part 279
- Oil on vessels - Not regulated under RCRA until on shore
- Oil with PCBs - TSCA applies if there are any quantifiable levels of PCBs!

#### IV. Characterization of used oil - 40 CFR 279.10

- Used oil mixed with a listed HW must be managed as a listed hazardous waste. [NOTE: It is a HW fuel if subsequently burned for energy recovery in a Boiler or Industrial Furnace (BIF).]
- Used oil mixed with a characteristic HW is a HW if the mixture exhibits a characteristic.
- Used oil mixed with an ignitable ONLY hazardous waste (D001) may be managed as a used oil if the mixture does not exhibit an ignitable characteristic. (40 CFR 279.10(2)(iii)). (NOTE: generally, only degreasing mineral spirits will qualify).
- HW managed by CESQGs under Part 261.5, when mixed with their own used oil, may be managed under 40 CFR 279; however this may result in substantial extra costs for disposal through used oil or HW contractors and is not recommended.

#### Halogens in used oil

Used oil with >1000 ppm halogens is always presumed to be a HW. This is a rebuttable presumption!

The following examples may be used to demonstrate that the oil does not contain HW:

- CFCs from refrigeration compressor oil (however, it must be reclaimed for Freons to be excluded from regulation)
- High temperature chlorinated cutting oil
- Saltwater in oil may give false high readings
- The contamination is solely from "DIY" used oil that the generator accepts from off-site do-it-yourselfers
- Generators may demonstrate, by chemical analysis, that the oil does not contain significant concentrations of halogenated HW constituents listed in Appendix VII of 40 CFR Part 261.
- The generator **MUST** make the claim and document support of his claim if he is rebutting!!
- If it is not one of the "mixed with: " types (or the rebuttal is successful), and the Used Oil is to be burned for energy recovery, it is a "Used Oil Fuel"

#### V. Used oil fuel specifications

Specifications are a set of criteria intended to be protective of human health and the environment in all circumstances. A used oil that meets specification levels is comparable to a product fuel in terms of regulation. Used oil that is tested and is not within these set parameters is termed off-specification.

#### On-specification oil

- On specification oil does not exceed any specification limits (see below), has not been mixed with HW,\* or is from households ("DIY" oil). **or** has had ignitable characteristic only waste added and meets the performance standard.
- It is subject only to the analysis and recordkeeping requirements under Part 279.
- On specification oil generally may be managed or burned by anyone for any legitimate oil burning purpose (e.g., space heaters, boilers, oil furnaces) regardless of whether it is generated on-site or not.

- Used oil may occasionally exhibit a characteristic of a HW because of its normal use. Used oil that exhibits a characteristic may still qualify as on-specification used oil if HW has not been added to it and the generator can certify this claim.
- Used oil from CESQGs who have added their HW to used oil, or oil to which ignitable only HW has been added or other non hazardous wastes, or which has been mixed with contaminated "DIY" oil, may cause "ISSUES" with your used oil collector and result in additional charges for management. This is beyond DEQ's control. We advise against mixing used oil and other materials.

### **Off-specification used oil**

Used oil to be burned for energy recovery exceeding any of these specification limits (total metals analysis, not TC) is termed "off-specification used oil fuel."

- Arsenic 5 ppm
- Cadmium 2 ppm
- Chromium 10 ppm
- Lead 100 ppm
- Flash point 100°F minimum (i.e., fp must be greater than 100°F)
- Total Halogens >4,000 ppm

Off specification oil may only be managed by Used Oil Marketers or Burners who have notified the Department of this activity and who have obtained an EPA ID number - i.e., full regulation under Part 279.

Off specification oil may only be burned in industrial furnaces or boilers, in accordance with Part 279 regulations applicable to Burners.

## **VI. Off-specification oil management**

### **Marketer/burner requirements (aka Burners/Blenders, BBLs)**

- Notification of Regulated Activity (EPA Form 8700-12)
- Must have an EPA ID number
- Record keeping and analysis requirements
- Full regulation under Part 279 applies

### **Generator requirements**

- Subject to marketer or burner requirements if conducting those activities
- ANALYSIS IS REQUIRED
- Offer it only to marketers or burners who have notified the Department that they manage off-specification oil and who have an EPA ID number
- Offer only to transporters who have an EPA ID number

Unless generators are also off-specification used oil burners, or market directly to an off-spec burner, no other special requirements apply (other than analysis). However, generators are allowed under RCRA to burn oil generated on-site in their own oil-fired space heaters (no off specification oil from off-site allowed) without registering as a Burner. Certain DEQ Air Regulations restrictions may apply which will limit this activity.

## **VII. On-site used oil storage**

Under 40 CFR 279.22, generators must:

- Store oil in tanks or containers (or units subject to RCRA standards)
- Maintain containers and tanks in good condition, no leaks
- Label containers and tanks with the words "Used Oil" (or label fill pipes for USTs)
- Establish a Spill Prevention, Control and Countermeasures (SPCC) plan, where applicable
- Use a transporter with an EPA ID number

## **VIII. Used oil filters - 40 CFR Part 261.4(b)(13)**

Final rule promulgated in the May 20, 1992, Federal Register Used oil filters are NOT regulated as a hazardous waste if managed by one of the following methods:

- Puncturing the filter anti-drain back valve or the filter dome end and hot-draining
- Hot draining and crushing
- Dismantling and hot draining; or
- Any other equivalent hot-draining method which will remove used oil
- Virginia follows the federal exemption for this provision - some states do not recognize this exemption

Filters managed by one of these methods are still regulated as a solid waste subject to solid waste management regulations; however, they may be managed for scrap metal reclamation. {NOTE: Gasoline, diesel, air, transmission or other type filters are NOT included in the used oil filter exclusion. They may be excluded from potential HW regulation only if being recycled as scrap metal. Otherwise, the generator must determine if they meet a HW characteristic.}

## **IX. Space heaters - 40 CFR Part 279.23**

In general, generators may burn used oil in oil fired space heaters. The heater must burn only used oil that the owner or operator generates, on specification oil, or used oil received from household "DIY" generators. The heater must be designed to have a maximum capacity of not more than 0.5 million Btu/hr and the combustion gases must be vented to the ambient air. Wood fired stoves or similar devices employed as oil burning heating devices do not usually meet the requirements of a legitimate space heater; DEQ Air Division will have jurisdiction in making specific device determination.

Generators may burn their own on- or off-specification used oil in their own space heaters (40 CFR Part 279.20(b)(3))

CESQGs may also burn their on-site generated oil in their own space heaters, even if the used oil has been mixed with their own hazardous waste. However, DEQ Air Regulations may severely restrict this activity.

On specification oil ONLY may also be received from off-site and burned in space heaters. However, the user must be prepared to demonstrate by records or analysis that any used oil received from off-site meets the specification. Otherwise such activities may be considered improper Burner or Incinerator activities for failure to meet the used oil analysis requirement, and will be subject to possible enforcement action.

## **X. "DIY" household used oil**

Virginia strongly encourages businesses and household generators to participate in programs designed to collect used oil from do-it-yourself ("DIY") oil changers. "DIY" oil is excluded from the specification requirements and most management standards of Part 279. DIY oil from engine crankcases is not known to exceed specifications in most cases and only in rare cases is DIY oil likely to be contaminated with a material which may cause oil to exceed a specification.

Businesses receiving DIY used oil may manage it by adding it to their own used oil, maintaining it separately for delivery to used oil collectors, or burning it in their on-site space heaters. Businesses collecting DIY used oil should advise their customers of their requirements for accepting their oil. A posted notice to customers stating drop-off hours and procedures, warnings against contaminating their oil with other automotive fluids, and a log-in sheet for participants are recommended. After-hours and uncontrolled drop-offs should be discouraged.

A separate DEQ information paper is available on this subject to interested parties.

**\*\*\* PLEASE NOTE: THIS IS AN INSTRUCTIONAL SUMMARY FOR COMPLIANCE ASSISTANCE PURPOSES. GENERATORS ARE ENCOURAGED TO REVIEW THE COMPLETE HAZARDOUS WASTE MANAGEMENT REGULATIONS AND TO CHECK WITH APPROPRIATE DEQ STAFF IF THEY HAVE ANY SPECIFIC QUESTIONS ABOUT REGULATIONS APPLICABLE TO THEIR WASTE STREAMS. \*\*\***

Virginia Department of Environmental Quality  
Hazardous Waste Program  
Revision: 05/06/2014