



# Used Oil Storage & Handling

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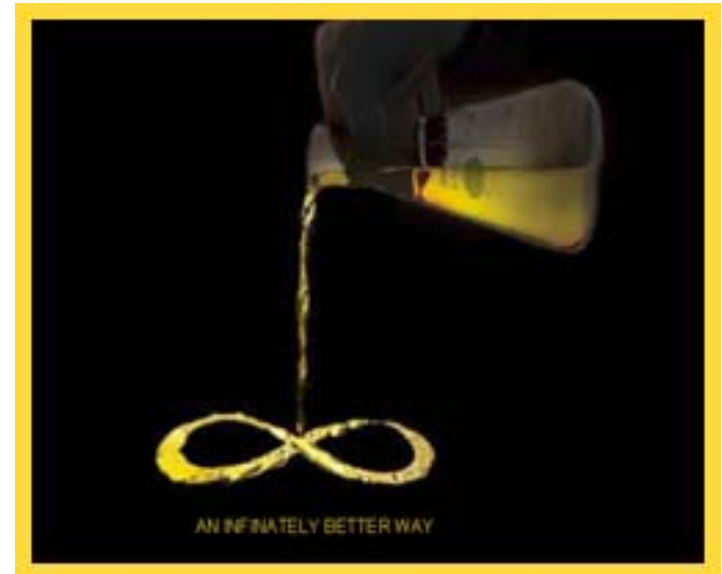
# Overview

**Used oil can be returned to the market in a variety of forms as part of a cycle that can be endlessly repeated. Recycling is a better solution for used oil and is recommended by the EPA and U.S. Department of Energy.**



# Management of Used Oil

- ▶ **1.4 BB gals of used oil generated in US yearly**
- ▶ **Estimated that 200 MM gals are improperly managed**
  - **Put down the drain**
  - **Dumped onto the ground**
  - **Sent out in the trash**



# Management of Used Oil

- ▶ **Used Oil Management Standards (40 CFR 279)**
- ▶ **- Impose requirements related to:**
- ▶ **1) Storage**
- ▶ **2) Transportation**
- ▶ **3) Processing**
- ▶ **4) Re-Refining**
- ▶ **5) Burning**



# Recycling Waste Oil and the EPA



**The EPA requires proper management of used oil to:**

- Protect human health
- Protect the environment
- Protect against liability for environmental damages
- Re-use (rather than waste) a valuable resource

**The five proper recycling methods recognized by the EPA are:**

- Waste Oil Re-refining
- Direct burning (heaters at shops)
- Processing (e.g. creating RFO)
- Slipstreaming
- Supplementing diesel fuel

# Examples of Used Oil



**Engine Oil   Synthetic Oil   Transmission Fluid**  
**Compressor Oil   Electrical Insulating Oil**  
**Metalworking Fluids   Hydraulic Fluids**

# **NOT examples of Used Oil**

**Tank Bottoms from virgin oil tanks**

**Fuel Oil spill clean up**

**Antifreeze**

**Vegetable Oil**

**Animal Oil**

# Used Oil Recycling



## Label Properly

- Regulations require containers of used oil to be marked as “used oil”
- It is improper to not have them labeled “used oil”
- It is improper to have the containers labeled with the previous contents information
- Residue last contained could create a hazardous waste



# Used Oil Recycling



## Container Integrity

- **Be sure containers are free of defects**
- **Be sure containers have the integrity to securely hold the used oil**
- **Ensure that the containers are securely sealed.**
- **It is not uncommon to see where containers have been left open and rainwater has purged used oil stored in drums onto the ground**

# Used Oil Recycling



**Ensure your used oil is compliant with SPCC regulations ( you may have to register it )**

## **Safe Storage**

**Since oil is an organic, you should store it away from inorganics such as :**

- Acids**
- Bases**
- Oxidizers**

# Used Oil Service Providers



- ▶ Questions to ask your provider :
  - What is their EPA ID #
  - Where does the used oil go
  - What becomes of the used oil
  - Can you see their haulers permit
  - What insurances do they carry

# Oil and Water

## **The impact of water in your oil :**

- water reduces value of oil**
- water costs money to treat**
- these are reasons to segregate your used oil**

# Definitions



CESQG – Generates less than 220 lbs of hazardous waste in a given month

SQG – Generates more than 220 lbs but less than 2,200 lbs of hazardous waste in given month

LQG – Generates greater than 2,200 lbs of hazardous waste in given month

# Definitions



- ▶ **PCB – A chemical highly regulated by the EPA**
  - Will cause increased paperwork if detected
  - Will cause increased costs to treat if levels exceed regulatory limits .. ex .. Greater than 50 ppm
  
- **Rebuttal Sample .. A sample sent to a laboratory for additional analysis**



# Best Practices: Managing Oily Water



# Waters Impact



- ▶ **Water in the oil reduces the profitability of your oil**
  - **Wet oil reduces what is paid for the oil**
  - **Water in your oil may result in costs to treat**
  - **These factors are reasons to clearly segregate your used oil**



# Educate your employees



- ▶ **Show the employee the benefits of handling oily water correctly**
  - Leaving oily water in the tank will quickly lead to rusting of the tank's welded seams from the inside out
  - Rusted seams equals leaking tanks, an environmental hazard, costly remediation + repairs and loss of used oil revenue
- ▶ **Show the employee correct water management:**
  - Keep the tank opening covered and rainwater out
  - Collect leftover antifreeze from radiator services in a separate drum or tank
  - Do not put mop water in the tank...move it to your Oil/water separator or pit sump

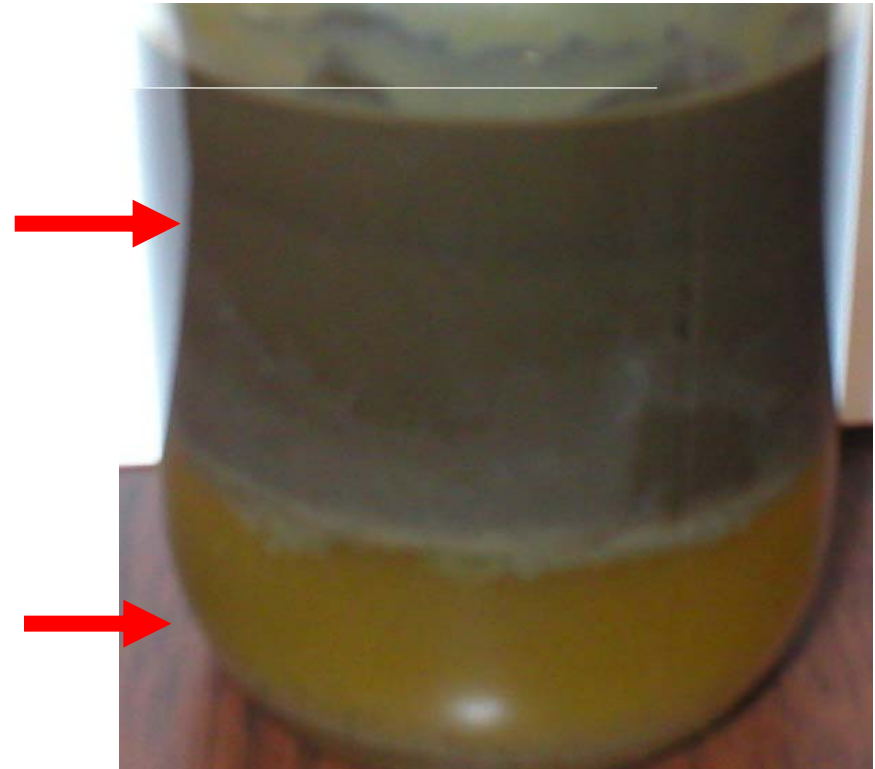
# Oil vs. Emulsion

## Oil



**Dark, uniform color and consistency**

## Oily Water Emulsion



- **Separates into multiple layers**
- **“Milky” emulsion layer**

# QUESTIONS