



## Used Oil Overview

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### Today's Goals

- Provide overview of the environmental used oil regulations with emphasis on the used oil generator requirements in the waste regulations, including identifying:
  - How used oil is defined and characterized
  - Used oil general recordkeeping, management, & recycling requirements
  - Used oil compliance tools

### Do I Need to Know All of This?

- Used oil regulations...
  - apply to all businesses, including municipalities, hospitals, & service industries, not just manufacturing industries
  - are written broadly to address hazards posed by all waste streams
  - are written to limit the mixing of hazardous waste with used oil for sham disposal
  - require that used oil be recycled where feasible
  - ensure proper accumulation and recycling of used oil
  - define materials acceptable to burn as used oil fuel
  - ensure sources burning used oil vs hazardous waste had adequate environmental and human health protections

### Why Cover These Topics?

- Used oil regulations require businesses to...
  - properly label all containers
  - properly store all these materials to prevent escape to the environment
- Proper management and storage will...
  - prevent release to the environment
  - prevent costly clean up expenses

### Environmental Oil Regulations

- Waste regulations governing proper characterization, accumulation, and recycling of used oil are found in Act 451, Michigan Natural Resources & Environmental Protection Act (NREPA):
  - [Part 111](#), Hazardous Waste, and the [Part 111 rules](#)
  - [Part 121](#), Liquid Industrial By-Product
  - [Part 167](#), Used Oil
  - [Part 115](#), Solid Waste, and the [Part 115 rules](#)
- Michigan's used oil regulations are found under Part 111 instead of the federal Resource Conservation and Recovery Act and 40 CFR 279
- Waste regulations governing used oil transport are found under Michigan [Act 138](#), Hazardous Materials Transport Act, of 1998 (not to be confused with the federal Hazardous Materials Transportation Act covering [U.S. DOT regulations](#) implemented by the [Michigan State Police](#))
- Other regulations governing used oil found in Act 451, Michigan Natural Resources & Environmental Protection Act (NREPA) include:
  - [Part 55](#), Air Pollution Control, and the [Part 55 rules](#)
  - [Part 31](#), Water Resource Protection, and the rules promulgated thereunder

- Used oil is subject to waste regulation under Parts 111, 121, and 167 of the Michigan Natural Resource and Environmental Protection Act; air regulations under Part 55 of the NREPA; and water regulations under Part 31 of the NREPA
  - [Part 111](#) and [121](#) establish hazardous waste and liquid industrial by-product management standards for the used oil
  - [Part 167](#) requires that the used oil be recycled
  - [Part 55, Part 2](#) rules cover air permitting and who is authorized to burn used oil as fuel
  - [Part 31 , Part 5 rules](#) require secondary containment and secondary containment inspections if storing:
    - $\geq$  1320 gallons of oil (all containers/tanks) or
    - One tank > 660 gallons oil
  - Under Part 5 of Part 31, oil means any kind of oil in any form, including oil products (specification used oil or other fuels) and wastes (used oil accumulated for recycling)
  - For more details on air and water regulations, see the [Michigan Guide to Environmental Health and Safety Regulations](#), Chapters [1](#) and [4](#)
  - [Chapter 4](#) also covers the federal [Spill Prevention Control & Countermeasures](#) regulations that require spill planning for oil and the federal Toxic Substance Control Act addressing [PCB containing materials](#)

### Used Oil Defined

- Under Part 111, used oil is “any oil which has been refined from crude oil, or any synthetic oil, which has been used and as a result of use, is contaminated with physical or chemical impurities” and includes:
  - Used motor oil
  - Used hydraulic oil
  - Used transmission fluid
  - Used brake fluid
  - Synthetic oil
  - Spent quench oil
  - Spent gear oil
  - Oil-water mixtures
  - Non-PCB transformer oil
- Under Part 111, used oil does NOT include petroleum based products that were not designed to function as lubricating agents or other protective applications
- Under Part 111, used oil does NOT include:
  - Fuels (Gasoline, Diesel, Fuel Oils)
  - PCB oils (subject to TSCA)
  - Mineral spirits
  - Certain test/calibration fluids
  - Animal fat or vegetable based oil
- Unlike other wastes, used oil that solely exhibits one or more of the hazardous waste characteristics of Rule 212 can still be managed as a used oil when recycled and is not a hazardous waste
  - For example used oil CAN exceed the TCLP limits in Table 201a of Part 111 if recycled and is regulated as liquid industrial byproduct

### Used Oil Characterization Under Part 111

- The hazardous waste rules applied to used oil containing > 1000 PPM total halogens
- Used oil with > 1000 PPM total halogens is a presumed listed hazardous waste unless sufficient characterization data can be presented to “rebut the presumption” that the halogens are present from mixing used oil with a listed hazardous waste halogenated solvents)
- Examples of chlorinated solvents include carbon tetrachloride, trichloroethylene, methylene chloride, and tetrachloroethylene, each which contain chlorine and are “F-listed” solvents
- Halogens are group of elements in the periodic table that are related and include fluorine, chlorine, bromine, iodine, astatine, and tennessine

- Generators can use knowledge or testing to characterize used oil
  - Knowledge
    - MSDS
    - Facility process information
    - Regulatory exemption
    - Hazardous waste listings
  - Testing
    - Analyze for total halogens using SW-846, [Method 9056A](#)
    - Screening equipment like “Chlor-D-Tect”
- Transporters screen used oil prior to pick-up to verify halogens are  $\leq 1000$  PPM and they can manage the oil as liquid industrial by-product
- Generators should keep copies of screening results from transporter
- Screening data should be consistent with and support the generator characterization determination/record
- “[Rebutting the presumption](#)” is complicated for transporters & processors accepting used oil from multiple sources
- Transporters & processors do not accept used oil with  $> 1000$  ppm total halogens unless successfully rebutted
- Total halogens are usually tested using test method SW 846, Method 9056A and/or using on-site screening equipment like “Chlor-D-Tect”
- If used oil contains  $> 1000$  PPM total halogens, it is presumed to have been mixed with listed halogenated hazardous waste unless rebutted

#### Used Oil Characterization Under Part 111 - Rebuttable Presumption

- EPA/DEQ has discretion in determining what concentration is a “significant concentration” prompting rebuttal
- RCRA does not contain regulatory threshold for each halogenated hazardous constituent
- Generally look for concentrations less than 100 ppm for common hazardous halogenated constituents per Federal Register preamble
- If  $> 1000$  PPM total halogens present, additional, costly testing is required to “rebut” whether used oil was mixed with hazardous waste:
  - Analyze for all halogenated Appendix VIII constituent
  - If  $> 100$  PPM used oil fails and must be managed as a hazardous waste
- **CONCLUSION: Do not mix used oil with other wastes to facilitate required recycling and avoid being required to manage the mixture as a hazardous waste!!!**
- Unlike the federal RCRA and 40 CFR 279, Michigan rules DO NOT allow CESQGs to mix halogenated solvents with used oil and have it be subject to regulation as used oil
- CESQGs are not allowed to add halogenated solvents to used oil
- CESQG used oil mixed with halogenated solvents is a hazardous waste under Michigan regulations
- Recycled used oil with chlorinated paraffins typically have a total organic halogen content of 4,000 ppm or more and may be recycled and reused through a tolling agreement per Part 111, Rule 203(1)(e)(i) without rebuttal
- Recycled heat transfer fluids from mobile and/or commercial/industrial air conditioning units typically contain CFC (chlorines and exhibit high halogen concentrations) and when recycled and reused are not subject to the rebuttal

#### Used Oil Characterization Under Part 121

- Under Part 121, animal and vegetable fat is a liquid industrial by-product, including materials like grease trap waste unless it is managed under the Bodies of Dead Animals Act or direct shipped to a Part 55 authorized biofuel producer
- Bodies of Dead Animals act is implemented by MDARD
- Oil and fat must be sent to a MDARD registered renderer for recycling using a MDARD registered transporter
- Used oil that is directly burned to recover energy or used to produce a fuel in Michigan is not a liquid industrial by-product if:
  - It meets the used oil specifications in Part 111 Rule 809(1)(f)
  - It contains no greater than 2 ppm polychlorinated biphenyls (PCBs\*)
    - Depending on the process that generated the used oil PCB screening may be appropriate

- A minimum energy content of 17,000 BTU/lb.
- Is expressly authorized as a used oil fuel under Part 55

#### Specification Used Oil Under Part 111 Rule 203(1)(e) and 809(1)(f)

- If  $\leq 4,000$  ppm halogens and passed rebuttal, manage as product, specification used oil, if it meets the following specifications and can be marketed as fuel
  - Heating Value 17,000 BTU/Lb.
  - Arsenic  $< 5.0$  ppm
  - Cadmium  $< 2.0$  ppm
  - Chromium  $< 10$  ppm
  - Lead  $< 100$  ppm
  - Sulfur  $< 1.5$  % Typical
  - ~~Total Halogens  $< 1,000$  ppm (Correction)~~
  - PCB  $< 1$  ppm\*

#### Off-Specification Used Oil Under Part 111 Rule 809(f) and 814

- If  $> 4,000$  ppm halogens and passed rebuttal, manage as off-specification used oil if it meets the following specifications and can be marketed as fuel
  - Heating Value 17,000 BTU/Lb.
  - Arsenic  $< 5.0$  ppm
  - Cadmium  $< 2.0$  ppm
  - Chromium  $< 10$  ppm
  - Lead  $< 100$  ppm
  - Sulfur  $< 1.5$  % Typical
  - ~~Total Halogens  $< 1,000$  ppm (Correction)~~
  - PCB  $< 1$  ppm\*
- Note, off-specification used oil remains subject to the liquid industrial byproduct requirements

#### Used Oil and PCBs\*

- As a practical matter, polychlorinated biphenyls must be  $< 1$  ppm to be marketed as fuel in Michigan
- Air permits limit PCBs to 1 ppm which is the detection limit for PCBs in oil using current test methods (SW-846 Method 8082)

#### Used Oil Required Waste Records

- Required records include:
  - Used oil characterization
  - Used oil Shipping/Recycling Documents
- Both are required for at least 3 years from the date of last shipment

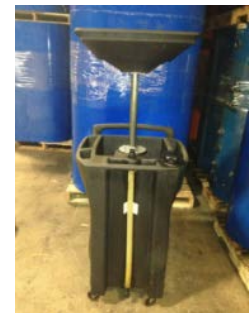
#### Used Oil Shipping Documents

- [Uniform Hazardous Waste Manifests](#) are no longer required for shipments of used oil  
Shipping documents can be in written or electronic form
- May be a log, invoice, bill of lading, or uniform hazardous waste manifest
- Must be readable, readily accessible, and have required information
- Required information:
  - Name and address of the generator
  - Name of the transporter
  - Type and volume of by-product in the shipment
  - Date the by-product was shipped off-site
  - Name, address and Site ID number of the designated facility
  - Individual Shipping Document Certification
- Certifications, distribution, and notification for individual shipping documents
  - Generator or generator representative signs/certifies shipping document stating:
    - the shipping document fully and accurately describes the shipment
    - the shipment is in proper condition for transport
    - the shipping document information is factual
    - Individual Shipping Document Certification

- Transporter signs/certifies shipping document stating by-product listed on shipping document:
  - was received
  - will be delivered to the designated facility identified on the shipping document
  - Individual Shipping Document Distribution
- Generator retains copy of shipping documents with generator and transporter signature
- Transporter obtains copy of shipping document with both signatures which accompanies the shipment during transport
- Designated facility must:
  - provide confirmation of receipt to the generator or generator representative
  - only accept delivery where accompanied by shipping document listing the designated facility
  - Individual Shipping Document Certification and Distribution
- Designated facility – No certification or shipping document distribution is required
- Designated facility confirmation may be written or electronic (documented phone call, email, receipt, shipping document or manifest copy)
- Certification, distribution and notification for consolidated shipping document
  - Transporter completes shipping document requirements for both the generator and transporter and must leave the generator receipt at pickup that includes:
    - Transporter’s name
    - Driver’s signature
    - Date of pickup
    - Type and quantity of by-product (used oil) shipped
    - Consolidated shipping document number
    - Receiving designated facility name
- Designated facility must provide confirmation of receipt to the transporter
- Generators should obtain confirmation of receipt at the designated facility from the transporter in written or electronic (documented phone call, email, receipt, shipping document or manifest copy)

**Used Oil Management and Recycling**

- Used oil managed by the generator, transporter or recycler must. . .
  - be managed in tanks or containers that are in good condition with no visible signs of leaks
  - Be labeled “Used Oil” if stored in a container or above ground storage tank
  - Have fill pipes used to transfer used oil labeled “Used Oil”
- Used Oil managed by the generator, transporter or designated facility shall be managed such that:
  - Exterior of all vehicles, containers and tanks used to hold used oil are free of use oil residues
  - Used oil may not be discharged to soil, surface water, ground water, a drain, sewer, or the air
- Used oil managed by the generator, transporter or recycler must. . .
  - be protected from weather, fire, physical damage and vandals
  - Be in closed containers that are only opened to add or remove used oil



**Non-pressurized mobile oil drain pan**



**Funnel with locking valve**

**Used Oil Closed Container**

- Containers in storage:
  - Cover secured with snap rings bolted
  - Bung caps capped
- Containers in use:
  - Lids properly affixed to prevent spills
  - Funnels with manual or spring-loaded lids or tightly screwed into bung cap with a one- way valve
- Non-pressurized mobile oil drain pans, at a minimum, must be emptied when not in use to be considered closed!

## Used Oil Transport

- A person engaged in the off-site transportation of liquid industrial by-product (used oil in this case) by air, rail, public roadway, or water on public roadway
- Liquid industrial by-product transport requires a permit & registration under Michigan Act 138 of 1998
- Act 138 also requires spill insurance documented on the MCS-90 form
- Transporters must carry credential in vehicle verifying permit and registration is effective during transport
- Generators can self-transport if insured and have required MCS-90 form verifying coverage for spills
- Generators can only offer used oil for transport to Act 138 permitted and registered transporters
- See transporter web page to find authorized transporters at [www.michigan.gov/deqwaste](http://www.michigan.gov/deqwaste)
- See [www.michigan.gov/ehsguide](http://www.michigan.gov/ehsguide) - Chapter 4 covers Act 138 and U.S DOT requirements

## Used Oil Receiving Facilities – Additional Requirements

- Liquid Industrial by-product designated facility is a facility that receives liquid industrial by-product generated by another site (used oil in this case)
- Used oil designated facilities may store, treat, process, and/or reclaim use oil
- Used oil must be recycled and residues must be managed appropriately
- Used oil designated facilities cannot store used oil/liquid industrial by-product for ≥ 1 year unless
  - at least 75% is reclaimed on-site and/or
  - at least 75% is transferred to another site for reclamation
  - Ultimately at least 75% of material throughput must be reclaimed or destined for reclamation
  - Records demonstrating 75% reclaimed and/or sent for reclamation must be maintained and available
- Must report annually by April 30<sup>th</sup> on previous calendar years activities
- If used oil processing, treating, reclaiming, must also biennially report by March 1<sup>st</sup> of even years for activities occurring in odd calendar year activities
- Must maintain a plan for responding to unplanned releases and minimizing the release hazards
- Train staff to properly handle the liquid industrial by-product (in this case used oil), respond to releases, and document that training occurred

## Use Oil Releases

- If a fire, explosion, or release of liquid industrial by-product occurs that could threaten the public health, safety, welfare, or the environment or reaches surface water or groundwater, take immediate action to
  - Protect the public health, safety, and welfare
  - Notify local authorities
  - Notify the Pollution Emergency Alerting System at 800-292-4706
- Within 30 days of the release, prepare and maintain a report that includes the data elements in the statute and:
  - describes the release
  - describes the response actions
  - includes analytical data collected
- Maintain the report on file and submit it to the DEQ upon request
- See [www.michigan.gov/chemrelease](http://www.michigan.gov/chemrelease) including Release Notification Requirements in Michigan Table for details on reporting requirements under other, non-waste environmental regulations

## Used Oil Compliance Tools

- [Used Oil Overview](#)
- [Generator Used Motor Oil](#)
- [Generator Other Used Oil](#)
- [Used Oil Filter Generator Requirements](#)
- [Used Oil Sorbents](#)
- [Burning Used Oil](#)

GENERATOR CHECKLIST FOR COMMON VIOLATIONS		COMPLIANCE RESOURCES
1	<input type="checkbox"/> Yes <input type="checkbox"/> No Are all used oil containers and tanks in good condition and protected from weather, fire, physical damage and venting? MCL 324.12113(i)	1 All containers and tanks holding used oil are to be in good condition and protected from weather, fire, physical damage, and venting. Indoor storage is recommended.
2	<input type="checkbox"/> Yes <input type="checkbox"/> No Except when oil is being added or removed, are all used oil containers and tanks tightly closed in a manner that prevents spills? If using non-pressurized mobile oil drain pans, is the equipment empty when not in use? MCL 324.12113(j)	2 Except while specifically being used to add or remove oil, all containers and tanks holding used oil are to be tightly closed to prevent spills. Closed means that the cover is secured with the wrap rings bolted and the bung cap is firmly tightened, except for non-pressurized mobile oil drain pans that must be, at a minimum, emptied when not in use.
3	<input type="checkbox"/> Yes <input type="checkbox"/> No Are all used oil containers and tanks, including non-pressurized mobile oil drain pans clearly marked with the words "Used Oil" and are the markings visible? MAC R 299.18163-3 and 40 CFR 279.220(c)(1)	3 All containers and tanks holding used oil are to be marked "USED OIL," including mobile oil drain pans. Used oil stickers can be purchased from safety equipment suppliers.
4	<input type="checkbox"/> Yes <input type="checkbox"/> No Do you have records on-site that show the used oil generated from each process was properly characterized? MCL 324.11139, MCL 324.12103, and MAC 299.3062	4 Used oil "characterization" involves evaluating the character and composition of your used oil to: 1) verify it has not been mixed with hazardous waste and 2) verify it is appropriate to recycle in accordance with the Michigan liquid industrial waste regulations. To understand how to characterize wastes, including used oil, view the recorded webinar at <a href="http://www.michigan.gov/deqwaste">www.michigan.gov/deqwaste</a> .
5	<input type="checkbox"/> Yes <input type="checkbox"/> No Do you have at least three years of used oil characterization and shipping records? MAC 299.3307 and MCL 324.12103	5 Waste characterization and shipping records must be created, maintained, and made available on-site for MDEQ review for at least 3 years from the date of last shipment.
6	<input type="checkbox"/> Yes <input type="checkbox"/> No Do your shipping records show self-transport and/or use of Michigan permitted and registered transporters that have Michigan Site IDs? MCL 324.12103	6 Unless transporting used oil yourself, used oil characterized as a liquid industrial waste can only be offered for transport to an MDEQ permitted and registered liquid industrial waste transporter. To verify transporter permit/registration, go to <a href="http://www.deq.state.mi.us/ehsp/AdvancedSearch.aspx">www.deq.state.mi.us/ehsp/AdvancedSearch.aspx</a> and: 1. Type in transporter's Site ID#, name, or headquarters office address, then select "Run Query" to locate the transporter. 2. Click the Site ID# of the desired transporter. 3. Select the "Transporter" Module info by selecting "View". 4. Select the most recent permit button to verify the permit and registration have not expired.
7	<input type="checkbox"/> Yes <input type="checkbox"/> No When shipping your used oil to Michigan receiving facilities, do your shipping records show the used oil was shipped to receiving facilities that are notified as "designated" facilities having Site IDs that recycle your oil? MCL 324.12103 and MCL 324.12104	7 Oil recyclers must notify the MDEQ of their waste activities. To verify recycler notification, go to <a href="http://www.deq.state.mi.us/ehsp/AdvancedSearch.aspx">www.deq.state.mi.us/ehsp/AdvancedSearch.aspx</a> and: 1. Type in oil recycler's Site ID#, name, or address and select "Run Query". 2. Click the Site ID# for the desired oil recycler. 3. Select the "Site ID" Module info by selecting "View". 4. At Site ID page, scroll down to view tabs listing "Owner/Operator", "Activities", "Site ID Fees", etc., and select the "Activities" tab to verify the recycler is notified as a used oil processor, user of motor/vehicle, and liquid industrial waste "designated facility".
MAC is the "Michigan Administrative Code" MCL is the "Michigan Compiled Laws" For additional guidance see <a href="http://www.michigan.gov/ehsguide/ehsguide/ehsguide-200902_7.pdf">www.michigan.gov/ehsguide/ehsguide/ehsguide-200902_7.pdf</a> Michigan Department of Environmental Quality		For information on MDEQ training events, subscribe for e-mail updates by clicking on the red envelope at <a href="http://www.michigan.gov/ehsguide">www.michigan.gov/ehsguide</a> For questions, contact the Environmental Assistance Center at: 800-662-5276 or <a href="mailto:deq-assist@michigan.gov">deq-assist@michigan.gov</a> . MAY 2015




- Oil Water Separators
- Common Violations Checklist
- Mobile Oil Change Business
- Used Oil Collection Centers

**Other Compliance Tools**


Michigan Guide to Environmental Health and Safety Regulations, Chapter 4 covers Part 31, Part 5 Rules; Federal Spill Prevention, Control, and Countermeasures; LARA, Bureau of Fire Services, Combustible Liquid Storage; and Michigan State Police U.S. DOT Regulations

- Chapter 34 covers MIOSHA Flammable and Combustible Liquids Regulations
- Register now for our additional webinars in the series to learn more about:
  - Accumulation and Labeling
  - Inspections & Recordkeeping
  - Conditionally Exempt Small Quantity Generator and Liquid Industrial By-product Generator Requirements
- Go to [www.michigan.gov/deqconnect](http://www.michigan.gov/deqconnect) to subscribe to receive DEQ information on topics of interest through:
  - GovDelivery e-subscriptions
  - YouTube
  - Twitter

EMERGENCY INFORMATION	
Emergency Name _____	Map of facility with emergency equipment, spill equipment, exit routes, and alarm locations.
Coordinator Phone _____	
Alternate Name _____	
Phone _____	
Fire Dept. Phone _____	
Hospital Phone _____	
Police Phone _____	
Fire alarm is located: _____	
Spill control equipment is located: _____	
Fire extinguishers are located: _____	
National Response Center ..... 800-424-8802	
Michigan Pollution Emergency ..... 800-292-4706	



**USED OIL**



**USED OIL FILTERS ONLY - NO TRASH!**