Welcome & Used Oil Basics

WHY IS USED OIL REGULATED AS A HW? & WHY SHOULD YOU CARE?
WHAT IS USED OIL?

Product Oil with a whole bunch *more* stuff in it

Contaminants
What is Used Oil for Recycle?

- Automotive or boating oil that is not mixed with any other substances.
- Includes motor oil, transmission fluids, differential oil, brake fluid, power-steering fluid and transaxle fluid.
IT’S NOT JUST OIL!
Where Does Used Oil Come From?
Spindle/Way Oil

- The lubricant for the milling machine gears, slides and other moving parts
  - Some way oil inevitably gets mixed with the coolant and becomes “tramp oil”
What’s in it?

- Possibly a lot of HEAVY metals
- TOXIC
  - Chromium
  - Arsenic
    - Known carcinogen
  - Lead
    - Damage to brain and Nervous system
  - Cadmium
TRANSFORMERS

PCBs
Solvents
What’s in it?

- PCBs are an electrical insulator
  - Extremely toxic
    - Likely to cause cancer, damage to immune system, nervous system, etc...
  - Extremely durable
  - 1978

- Solvents
  - Sometimes used to flush PCBs out of transformers
  - Toxic on their own
“FLY-BY-NIGHT” SCRAP METAL OPERATIONS

What’s in it? Anything from anywhere
What happens to oil in an engine?

- The high pressure in a combustion chamber forces fluids to mix
- Water, antifreeze, gasoline get mixed in
- These fluids might have contaminants that get into the oil
Good Oil Gone Bad

- Additives break down, resulting in ash and sludge
- Engine wears, resulting in metal “fines”
Rules for Used Oil

- It IS a HAZARDOUS WASTE
- Hazardous Waste has LOTS of Tough Regulations
- If used oil is handled the right way and recycled the right way, the regulations are much easier
Purpose of the rules

- The goal is to protect against the hazards of used oil and the stuff in it, without making it so difficult that no one wants to recycle it.

- They are not new.
History of Used Oil Rules

- Most concerned with automotive oil?
  - Volume
  - “character” of the generators
- Other types not ignored
- Goal is to be protective while encouraging recycling
As a result...

- A lot of things EPA requires aren’t in our rules
- A lot of things we require aren’t required by EPA
- A lot of things we require aren’t required by other states
So, is it “Used Oil”?  

Definition at Env-Hw 104.74  

- Derived from crude or synthetic oil  
- No longer suitable for its original purpose, due to:  
  - Physical impurities;  
  - chemical impurities; or  
  - loss of original properties
But wait, there’s more...

- Has been used as a:
  - lubricant
  - heat transfer fluid
  - emulsion
  - similar use (including hydraulic fluids)

- NOT:
  - commercial chemical products to be used as fuels
  - cleaning agents
  - solvents
  - wood preservatives
What is **NOT** Used Oil for Recycle?

- Gasoline
- Virgin heating fuel
- Diesel
- Oily water
- Antifreeze
- Biodiesel
- Vegetable oil
- Oil mixed with **insert ANY word here.**
• What Can I Collect?

• 1. Do-It-Yourselfer Used Oil

• 2. Your Town Vehicle Used Oil
Review

- **What is used oil?**
  - A “soup” of chemicals, many of which are known to be dangerous

- **Why do I care?**
  - Because I want everyone, including me, to handle this stuff properly and safely
  - Because I don’t want to be responsible for something bad or expensive
RECOGNIZING & MANAGING CONTAMINATED USED OIL

TIPS & TRICKS FOR USED OIL FOR RECYCLING FACILITY MANAGERS
Used Oil for Recycle

What is “the Good Stuff?”
- Residential used oil from automotive maintenance
- Known source and customer
- Quantity is in line with expectations

What is Contaminated Oil?
- Oil that has been mixed with other “Stuff”
  - Gasoline – Flammable/Low Flashpoint
  - Brake Cleaner – Chlorinated Solvents/VOCs
  - Antifreeze & Used Oil together – Not OK!
PROTECT YOUR FACILITY

• Look the Part!
  • Set up the area so you can keep it neat.
  • Signage with Instructions help the customers.

• Keep an eye on things
  • Visible Location.
  • Post signs or other indications of surveillance, if available.

• Ask Questions
  • Talk to the people dropping off used oil.
    • How’d you generate the oil? How much do you have?
    • What kind of containers did you bring?
  • Inspect containers when indications say to do so.

• Consider pouring off containers yourself…
EXAMPLES
WHAT TO DO? WHAT CAN YOU DO?

• Check the area and containers
  • Develop a quick checklist
    • Is the oil really thin?
    • Does it give off an odor?
    • Is there separation visible in the container?
    • What is the condition of the container?
  • Field Tests
    • 4-Gas Meter – Lower Explosive Limit (%LEL)
    • Q-Tip Test
      • Holds a flame with black smoke – That’s Oil
      • Flame jumps to Q-Tip – Indication of a flammable material
    • Dexsil Kit – Chlor-N-Oil & PCBs
WHAT TO DO WITH CONTAMINATED OIL?

- Contaminated oil must be disposed of properly
  - Separate the contaminated oil from the “Good Stuff”
  - Label the suspect containers
  - Call a disposal company
    - Characterize the waste
WHY SO IMPORTANT?
WHY SO IMPORTANT?
WHY SO IMPORTANT?
WHY SO IMPORTANT?
WHY SO IMPORTANT?

REMEMBER...THIS IS NOW A HAZARDOUS WASTE SPILL THAT REQUIRES PROPER CLEAN-UP
IN SUMMARY

- People NEED a place to easily and responsibly take care of their used oil.
  - Municipal Transfer Stations represent a great opportunity for recycling used oil
  - Consider energy recovery with a waste oil burner setup
    - Requires notification to NHDES
- Keep Oil Where It Belongs
  - Helps keep abandoned containers off the side of the road, in the woods, or down the drain
Department of Environmental Services

Clark Freise
Assistant Commissioner

Commissioner’s Office
Finance/Accounting
Planning & Technical Assistance
Public Information
Laboratory Services
Geological Survey
Human Resources
Legal

Waste Management
Hazardous Waste
Solid Waste
Oil/USTs/ASTs
Superfund/State Sites
Brownfields
MTBE

Water Division
Dams
Wetlands/Shoreland Protect.
Watersheds/Lakes/Rivers
Wastewater/Septic
Drinking Water Supplies
Winnipesaukee River Basin

Air Resources
Stationary Sources
Mobile Sources
Air Toxics
Environ. Health
Energy Efficiency
Climate Change
7 MEMBERS:
1 Administrator
5 State On Scene Coordinators
1 Oil Spill Response Coordinator

ON-CALL 24 HOURS, 7 DAYS A WEEK
State On Scene Coordinator (SOSC) duties:

- Overall management and coordination
- Member of Unified Command
- Act as liaison - federal, state, local agencies
- Provide technical assistance
Statutory Authority: RSA 146-A
Oil Discharge Or Spillage in Surface Water or Groundwater

- **Strict Liability** Any operator or owner ...shall be strictly liable for costs
- **Notification/Removal** NHDES shall be notified.... NHDES shall assume primary jurisdiction of the cleanup operation.
- **Duty to Report** Whoever is responsible or any “person” who becomes aware of an oil discharge....
- **Penalty** “willful” discharges
  - Shall be guilty of a misdemeanor or a felony
  - Failure to comply with the statute...civil penalty not to exceed $10,000 for each violation
  - Each day...shall count as a separate violation
  - Failure to comply with rule...$2,000 for each violation. Each day a separate violation.
- **Willful Failure to Comply** ...shall be liable to the state in double the amount of costs.
Response to Hazardous Air Pollutant Releases
Solid Waste Complaint Investigation
Hazardous Waste Complaint Investigation
HazMat Response
Response to Petroleum Spills
Transformer Spill
Truck Fire on 93
Oil dumped in the woods
Overfill of Gasoline tanks during delivery
Sunken Vessels
DES Provides Hazmat Response to non coverage towns
22 Locations throughout NH
Access Equipment through DES/fire department
Responsible Party pays for RESTOCKING
- Multigas Meters
- PID
- Field Identification of Unknowns
- PPE
- Drum handling
- Sampling
- Absorbent Boom and Pads
- Containment Boom
Communications Equipment

- Hand held radios
- Marine radios
- Vehicle mounted mobile radios
- Cellular phones
- Pagers
• Clean Harbors Environmental Services
• CYN Environmental Services
• NRC Environmental (formerly ENPRO and TMC)

STATE RESPONSE CONTRACT
WHO HAS TO REPORT THE SPILL?

• Whoever is responsible or...
• Any person who is aware.
Who Has to Be Notified?

Fire Department (call 911)

NHDES 603-271-3899 (M-F/8am-4pm)
603-223-4381 (all other times)

NATIONAL RESPONSE CENTER  800-424-8802 (surface water)
When to Report a Spill

- 25 gallons or more
- Not immediately contained
- Not cleaned up within 24 hours
- Impact to water (SW or GW)
What should be reported:

Your name & phone number

Date & time of spill

Product type & amount

Cause and Location

Who has been notified

Environmental impact

Responsible party

Actions Taken
Speed is essential

Oil spreads and drifts rapidly
Evaporation increases viscosity
Emulsification makes recovery more difficult
Inland Spill Response Program

Approx. 500 Spills and complaints/yr.
Managing Spills of Used Oil

Solid Waste Operator Training
Used Oil Management: Part III

February 7, 2017

Presented by

David Leathers
Managing Spills of Used Oil

Overview:

- What’s special about Used Oil?
- General Oil Spill response guidelines
- Rules governing Used Oil Spills
- Do I have to notify? If so, who?
- Preparing for a Spill
- Preventing a Spill
What’s Special about *Used* Oil?

- It’s an Oil.
- It’s a NH listed Hazardous Waste.
- Different Rules apply if it will be recycled...
Responding to a Spill of Used Oil

Being a “Pro” means remembering these “CONs”

- **CONFIRM** the spill site is safe.
- **CONTROL** the release of Oil.
- **CONTAIN** the spilled Oil.
- **CONTACT** appropriate authorities.
- **CONDUCT** the spill Clean Up.
- **CONSIDER** changes to prevent future spills.
How to Respond to a Spill of Used Oil

CONFIRM the Spill Site is Safe

Life Safety is of primary concern...

1. Assess the spill and determine if there is an immediate threat to health or safety.
2. If there is an immediate danger, evacuate all personnel; following the emergency response/Spill plans if they exists.
3. Contact the local Fire Department
4. If it can be done safely, take actions to reduce risks to human life.
How to Respond to a Spill of Used Oil

CONTROL The Release of Oil

Act to *stop the release* of more oil

- Set upright a knocked over container
- Turn off supply valves, if applicable.
- Plug punctures in container using spill kit materials
- Transfer contents from damaged container into an intact container.
- Contact FD if unable to control release.
How to Respond to a Spill of Used Oil

CONTROL The Release of Oil
How to Respond to a Spill of Used Oil

CONTAIN The Spilled Oil

Take actions to *prevent spread* of oil:

- Capture leaking oil in another container if possible.
- Create a containment barrier or berm around the spill using sorbents or Speedi-Dri to prevent the spread of oil.
- Cover, close or dike floor and storm drains, to prevent inflow of oil.
- Anticipate where the oil will go if it were to break through the berm. Plan accordingly.
How to Respond to a Spill of Used Oil

CONTAIN The Spilled Oil
How to Respond to a Spill of Used Oil

CONTACT Appropriate Authorities

- Fire Department (9-1-1)
- NHDES SRCIS Group (271-3899)
- State Police (223-4381)
- Facility Owner/Town Administrator
- US EPA NRC (National Response Center) 1-800-424-8802 – if release threatens health or environment outside facility or has impacted surface or groundwater.
How to Respond to a Spill of Used Oil

CONTACT Appropriate Authorities

Information to Provide:

- Name and Phone # of person notifying
- Location, Date and time of discharge
- Type and Amount of Oil Discharged
- Name and daytime Phone # of Responsible Party.
- The proximity of discharge to potential receptors (ie. surface waters and wells)
- Daytime contact info for contractor hired to clean up
- Descriptions of actions taken or proposed
- Names of agencies that have been called
- Cause of accident and/or detection method.
- All available reports or sampling results related to the discharge.
Rules Regarding Notification of NHDES following a Used Oil Spill

Rules governing ALL Petroleum Oils

- (NH) Env-Or 604.06: Releases of “Virgin” and/or Used Oil

Hazardous Waste Rules governing NH Listed Waste: Used Oil (NH01)

- (NH) Env-Hw 513.01 & 513.02
- & (US EPA) 40 CFR 265.56
Pursuant to **Env-Or 604.06** -- You **MUST** Report Spills *Immediately* When…

- Discharge of **ANY** amount of oil into *surface or groundwater* of the state;
- Discharge of **25 gal or more** to land
- Discharge of **less than 25 gal** to land – *unless immediately cleaned up and properly disposed of*
- Discharge resulting in **AGQS exceedance** or **NAPL in a water supply**
- Vapors are present that are *an imminent threat to human health*. 
Pursuant to Env-Hw 513.01(a) --
You MUST Report Spills Immediately When...

“In the event of any discharge of hazardous waste or of a material that when discharged becomes a hazardous waste that poses a threat to human health or the environment, including but not limited to a discharge into storm drains or sanitary sewers, onto the land or into the air, groundwater or surface waters, the generator shall report the discharge immediately...”
How to Respond to a Spill of Used Oil

CONTACT Appropriate Authorities

What does “immediately” mean?

“Immediately, not to exceed one hour from the discovery of the release;” Env-Hw 513.01(a)(1)
How to Respond to a Spill of Used Oil

**CONTACT** Appropriate Authorities

Is this spill contained?
Is the surface impervious?
Should NHDES be notified?
How to Respond to a Spill of Used Oil

**CONDUCT** the Spill Clean Up

1. Use sorbent boom, pads and speedi-dri from your spill kit to pick up small quantities of spilled oil.
2. Place recovered oil that cannot be recycled, oil soaked sorbents, soil and other materials in appropriate container for disposal.
3. Make arrangements for proper disposal of contaminated cleanup materials.

- Consider hiring an environmental clean up contractor if spill is large and/or complex.
How to Respond to a Spill of Used Oil

**CONDUCT the Spill Clean Up**

If Used Oil (NH01) that is spilled is a Hazardous Waste...

“Do I need to dispose of Used Oil (NH01) Soaked sorbents and other spill clean up materials as a hazardous waste?”

*Probably not, as long as...*
How to Respond to a Spill of Used Oil

**CONDUCT** the Spill Clean Up

**Exemption** under Env-Hw 401.03b(18)

“Spill absorbent materials, soil and debris from the cleanup of used oil spills, provided the used oil was not previously mixed with any other hazardous wastes listed in Env-Hw 402, and provided the spill absorbent materials, soil or debris do not exhibit a hazardous waste characteristic as set forth in Env-Hw 403;”
CONSIDER...

...changes to prevent future spills

- Ask *why* the spill occurred
- Review storage practices
- Improve, upgrade out of date equipment, containers, etc.
- Consider additional staff training – would it have made a difference?
Preparing for an Oil Spill

Best Management Practice

- Develop, Document and distribute a facility specific Spill Response Plan (SRP)
- Assemble “Spill Kits” adequate to the types of spills encountered at your facility.
- Train staff on use of the SRP and spill kits.
- Review annually (and update) the SRP, provide refresher training for staff, and inventory and restock the spill kits.
Preparing for an Oil Spill
Develop, Document and distribute a facility specific Spill Response Plan (SRP)
Preparing for an Oil Spill
Assemble “Spill Kits” adequate to the types of spills encountered at your facility

Purchase or Build your own, to include:

- Bags of Sorbents (Speedi-Dri)
- Sorbent Booms
- Protective Clothing (Gloves, suits, etc.)
- Containers for waste (small & large)
- Wooden Plugs, patches, duct tape
- Tools (Shovel, brooms, funnels)
- Copy of Spill Response Plan
Preparing for an Oil Spill
Train staff on use of the SRP and spill kits.

Training should include:

- Facility Hazards – potential spill sites
- Spill Response Plans – How they work
- Locations of Spill Kits
- Familiarizations with how and why Spill Kit Equipment is used
- Contact Numbers
Preventing an Oil Spill

Best Management Practice

“The easiest spill to clean up... Is the one that doesn’t happen.”

- Improve Facility Practices
- Conduct Self Inspections of your facility
Improving Facility Practices:
Requires asking certain questions…

- Is the oil stored in containers in poor condition?
- Can collection containers be easily overturned because they are not properly secured?
- Is Oil Collection Area easily observable by facility operator?
- Would the location of your stored Used Oil make containing a spill difficult?
Self Inspections: things to include

Key requirements should be on a checklist and include:

- Used Oil Containers are Properly labeled
- Containers are Closed
- Containers in good condition
- Containers under cover
- Containers stored on impervious surface or in secondary containment.
- Look for signs of previous or ongoing leak, seepage of overfilling of oil.
- Spill kits readily available and adequately stocked.
Thank you!

Questions?

**Robert Bishop**  
Robert.Bishop@des.nh.gov | 603-271-3440

**David Leathers**  
David.Leathers@des.nh.gov | 603-271-3624

**Used Oil Program**  
CASE SUMMARIES

USED OIL MISMANAGEMENT
CRAIG’S LIST CRISIS

• Summary
  • Local Business finds a listing on Craigslist for some waste oil
  • Contacts the person, arranges for and pays for the material
  • Several totes full of material arrive at the facility
    • Worker notices something strange about how thin the material is
    • Does a quick flash test, sends out a sample to a lab.
    • The material had a flashpoint of <20 deg. F!
    • The worker saved the building by not putting this into the waste oil furnace
The case became federal and the U.S. Attorney’s Office prosecuted the responsible party.

- The responsible party pled to a crime.
- The local business owner was finally able to have the material removed from the facility.
Summary

- NHDES received a call about oil in a pond and several ducks that were covered with oil.
  - NHDES, Local Fire Dept. and NH Fish & Game Respond.
  - NHDES verified that oil was in the pond.
  - Responders find several live ducks covered in oil, along with approximately 24 deceased ducks.
    - All of the living ducks were captured and sent for rehabilitation.
  - Investigation of the area revealed the source of the oil was a storm drain system that emptied into the pond.
  - The source of the release was believed to be the improper disposal of waste oil.
WATERFOWL CASE
WATERFOWL CASE
WATERFOWL CASE
WATERFOWL CASE
WATERFOWL CASE
WATERFOWL CASE
The matter is still under investigation.