

# Burning Used Oil in a Space Heater

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If you burn used oil in a space heater, there are requirements and limitations you should know. This publication answers many common questions.

## What Requirements Apply to Burning Used Oil in a Space Heater?

**Reduced Regulations.** Reduced regulations may apply to burning used oil in an on-site space heater. You are exempt from the more stringent used oil marketing and burning requirements, including the need to determine if your waste meets used oil specifications, if all of the following conditions are met:

1. The on-site space heater is designed to have a maximum capacity of not more than 500,000 BTUs per hour.
2. The combustion gases from the heater are vented outside.
3. Your heater burns only used oil that your business or institution:
  - generates on-site, or at other locations it owns or operates, or
  - receives directly from household do-it-yourselfers, or
  - receives from farmers who generate an average of less than 25 gallons of used oil per month.
4. The used oil is not hazardous waste.

If all of the above four conditions are met, you are burning used oil in an “exempt space heater”. However, used oil burned in a space heater is subject to the “rebuttable presumption” and may be regulated as hazardous waste based on “total halogen” content. This is explained more in the section below, “*Is Your Used Oil Hazardous Waste?*”

**Air Emissions.** To minimize air emissions the heater must be properly maintained and operated so that it burns the fuel completely and does not create smoke. If your unit exceeds the 500,000 BTU maximum capacity, you may need an air pollution control permit. Find Air Program staff contacts and information about air permitting requirements at:

<http://dnr.wi.gov/org/aw/air/>



**Used oil collected from households and aggregated by a second party, such as a municipal collection center, is no longer considered “household generated used oil” once it is received by a third party.**

## What are Used Oil Specifications?

If you do not meet the conditions listed in the previous section, you are not eligible for reduced regulations, and the used oil you burn must comply with US EPA’s used oil specifications. Used oil that meets the specifications, shown in the chart below, is called “on-spec”. These specifications are intended to be protective of human health and the environment. On-spec used oil is considered comparable to product fuel oil in terms of regulation.

Constituent or property	Allowable level
Arsenic .....	5 ppm maximum
Cadmium.....	2 ppm maximum
Chromium .....	10 ppm maximum
Lead .....	100 ppm maximum
Flash point.....	100 °F minimum
Total halogens.....	4,000 ppm maximum

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The first person to claim that the oil, destined to be burned for energy, is on-spec, is regulated as a used oil marketer. Regulations that apply to marketers are described below in the section, "Can You Accept Used Oil from Another Business?" Used oil that is not on-spec may be burned in an exempt space heater (see previous section), or must be burned only in certain boilers or industrial furnaces that meet specific regulatory standards.

### *Is Your Used Oil Hazardous Waste?*

Mixing used oil with hazardous waste may cause the entire mixture to be regulated as hazardous waste.

*Rebuttable Presumption.* With limited exceptions, used oil that contains 1,000 ppm or more "total halogen" is presumed to be mixed with a "listed hazardous waste" unless it can be demonstrated otherwise. This is called the "rebuttable presumption". Persons may rebut the presumption by showing, such as through testing or documentation of operations and processes, that the source of halogens is not a listed hazardous waste.

Information about "listed hazardous wastes" is in ch. NR 661, Subchapter D, Wis. Adm. Code. Information on total halogen test methods, the rebuttable presumption, and regulations for used oil and hazardous waste mixtures can be found in ss. NR 679.10(2) and 679.21, Wis. Adm. Code, and US EPA's "Guidance and Summary of Information Regarding the RCRA Used Oil Rebuttable Presumption":  
[www.epa.gov/reg5rcra/wptdiv/usedoil/905-R-03-005.pdf](http://www.epa.gov/reg5rcra/wptdiv/usedoil/905-R-03-005.pdf).

*Best management practices.* Not using chlorinated solvents in your shop and segregating chlorine-containing air conditioning refrigerant recovery oil, may help to ensure that your used oil is not hazardous waste.

*Very small quantity generators (VSQGs).* Mixtures of used oil and VSQG hazardous waste are regulated as used oil. To be considered a VSQG, you must produce less than 220 pounds of non-acute hazardous waste per month and accumulate less than 2,205 pounds of hazardous waste at any time. VSQGs mixing their used oil containing more than 1,000 ppm total halogens (such as chlorine-containing refrigerant recovery oil) with their other

used oil may rebut the presumption that the oil is hazardous waste by documenting that the mixture contains only VSQG hazardous waste. A VSQG who does this should keep records to show that the mixtures are regulated as used oil.

*Fuel Characteristics.* If you mix used oil with other waste for burning in a space heater, you should also: 1) ensure your fuel has enough fuel value, such as a minimum of 5,000 BTUs per pound, to be legitimately burned for energy recovery, and 2) ask your space heater manufacturer if your fuel mixture is compatible with the space heater design, construction, operation and warranty.



*Storage of Flammable and Combustible Liquids.* Even if you don't burn used oil, make sure you're aware of requirements for storing flammable and combustible liquids, building codes and other requirements that may apply. For more information, you can contact your local fire inspector, or visit this Department of Commerce website:  
<http://commerce.wi.gov/ER/ER-BST-UsedOil.html>

### *Can You Accept Used Oil from Another Business?*

Used oil accepted from another business can be burned in a space heater only if the oil is on-spec.

*Marketers.* The used oil marketer is the first person to claim the oil, destined to be burned for energy, is on-spec. Used oil marketers are subject to Used Oil Marketing Standards in Subchapter H of chapter NR 679, Wis. Adm. Code, and must do all of the following:

1. Analyze the used oil to prove it is on-spec
2. For 3 years, retain copies of the analysis or other information documenting that the oil is on-spec.
3. Keep a log of all used oil shipments including quantity, date and cross reference to the information used to determine that the oil is on-spec.

Used oil accepted from off-site that is not on-spec cannot be burned in a space heater, but must be sent to a used oil processor, re-refiner or certain boilers or industrial furnaces.

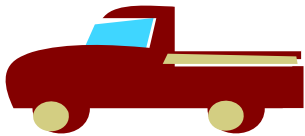
**You cannot burn used oil collected from another business in a space heater unless the oil meets used oil fuel specifications.**

A small business that burns used oil for supplemental fuel in a space heater may want to collect used oil from exempt generators such as households or exempt farmers, or purchase on-spec used oil from a commercial marketer. This may be simpler and more economical than making the specification determination and acting as your own marketer.

### *Is a Transportation License Needed?*

Unless exempt, persons transporting used oil are required to obtain both of the following:

- WDNR solid waste transportation license (contact your Regional Waste and Materials Management Program)
- US EPA identification number (see <http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm#links/links>)



#### *Self-Transport Exemption.*

A generator may self-transport small amounts of used oil to a collection center, or between sites

operated by the generator, without a solid waste transportation license and US EPA identification number, provided both of the following conditions are met:

- ◆ The used oil is transported in a vehicle owned by the generator of the used oil, or a vehicle owned by an employee of the generator.
- ◆ Not more than 55 gallons are transported at one time.

*Other Exempt Transport.* Persons transporting used oil from home do-it-yourselfers to a regulated used oil generator, or to other regulated used oil facilities, are not required to obtain a DNR solid waste transportation license or US EPA identification number, and are not required to comply with used oil transporter and transfer facility requirements.

### *For more information*

- *Waste and Materials Management Program Publications:*  
<http://dnr.wi.gov/org/aw/wm/publications/>
- *Hazardous Waste Administrative Rules and Statutes, including Chapter NR 679 – Used Oil Management Standards:*  
<http://dnr.wi.gov/org/aw/wm/information/wiacssh.htm>
- *Solid Waste Administrative Rules and Statutes, including Chapter NR 502 – Solid Waste Transportation:*  
<http://dnr.wi.gov/org/aw/wm/information/wiacsss.htm>
- *Wisconsin Recycling Markets Directory (search Category Index for Motor Oil Recycler):*  
<http://www.dnr.wi.gov/org/aw/wm/Markets/>
- *Regional Waste and Materials Management Program contacts:*  
<http://dnr.wi.gov/org/aw/wm/contacts/regions.htm>
- *Bureau of Waste and Materials Management:*  
608/266-2111 or  
[DNRWasteMaterials@Wisconsin.gov](mailto:DNRWasteMaterials@Wisconsin.gov)

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