



June 19, 2007

From: Donald Kleine
Owner
Vortex Recycling

To: Whom It May Concern

Subject: Used Oil Filter Recycling

We are looking for your help to promote this worthy and important environmental cause. Few causes offer greater return for the least effort and make such immense economic and environmental sense.

In the last 13 years the used oil filter recycling infrastructure and technology has made the recycling of used oil filters a substantial and profitable ALTERNATIVE FUEL SOURCE. Currently instead of recycling, this fuel oil, high quality steel and heat energy source is land filled and subsequently, polluting our landfills and water. Just one gallon of used oil has the potential of contaminating up to one million gallons of drinking water. Additionally; the used oil ends up in our country's rivers, lakes and streams threatening aquatic life.

Purifying and saving our environment begins with a conscious effort to find new uses for the products classified as "liquid and solid waste". Our current research shows 58% of all used oil filters are being dispensed into landfills.

Please review our compiled statements of facts and our proposed solutions and email us your response and/or questions to: landfillban@vortexrecycling.com.

Click here to learn more about Vortex Recycling www.VortexRecycling.com and why used oil filters should be recycled; why waste oil collectors need to collect used oil filters; and, what needs to be done to save our environment.

Thank you for your interest,

A handwritten signature in blue ink that reads "Donald R. Kleine". The signature is fluid and cursive.

Donald R. Kleine

REASONS WHY USED FILTERS SHOULD BE USED AS ALTERNATIVE FUEL INSTEAD OF BEING LANDFILLED

Over the last 13 years the national infrastructure and technology has developed to turn used oil filters into a profitable ALTERNATIVE FUEL SOURCE. This fuel instead is currently contaminating our landfills and water.

This is a large scale fuel source causing a large threat. Nationally the used oil filters generated monthly contain 375 semi-truck loads of oil after they are legally hot drained averaging 6.2 oz. per filter. This equals 2,250,000 gallons of used oil per month or 53,571 barrels of oil per month.

Congress has passed laws that make a typical roadside ten-gallon fuel spill cost \$5,000.00* to clean up. That same quantity of oil is in a 55-gallon drum of used oil filters. Congress allows it to be intentionally land filled when that 9 ½ gallons of fuel oil and 190# steel could be totally recycled along with 95 kilowatt hours of heat energy from the paper and gasket. 100% recycling would only cost a mere \$20.00 per drum to the filter changing shop. Currently most used oil collectors and automotive waste collectors supply this service free of charge in order to get the used oil business, yet most are still being land filled. Currently, used oil after minor processing and testing, is marketing for well over \$1.00 per gallon delivered by the semi load. This just does not make any sense!!

A landfill ban/mandatory recycling law would also give the consumers their money's worth. Most shops currently charge a \$1 to \$3.50 environmental/recycle fee per oil change even though they landfill the filters and get paid for the oil, currently at \$.65 per gallon.

Recycling would reduce landfill requirements at the rate of 2,253 semi-truck loads per month in used oil filters generated. This is a large concern of every community.

One gallon of oil can contaminate one million gallons of drinking water.

These 26,660 tons per month of low alloy scrap steel will make our steel industry globally more competitive and save energy used to produce more steel. Because of the intense forming to make an oil filter the steel purity must be premium thus making it more valuable.

Vortex is designing a Co-generation plant to cleanly convert the paper, gasket rubber, and paint in the oil filters into electrical energy and use the waste heat to recycle oil, antifreeze and cleaning solvent at the rate of \$5,000,000 per year.

A \$20.00 per barrel fee at the shop equates to \$.08 per filter to the consumer, or only about 3 percent of the \$2.50 environmental fee charged by most shops for an oil change. We are sure there will be no complaints from the consumer here.

A law should force all oil filter changing shops to recycle. Not just put the burden on the 60 percent that do.

* per HMHTTC Response Inc. one of the largest roadside emergency clean up response companies having facilities coast to coast.

At today's commodity prices after all transportation and handling is paid there is still \$22.00 of commodity value in each barrel of used oil filters and \$14.08 of quality heat energy to generate \$3.52 of electrical energy. This is a real waste of ALTERNATIVE FUEL and steel to loose in the landfills.

Each barrel of used oil filters recycled by Vortex generates \$20.00 in fees at the oil changer, plus \$14.55 in trucking and rail transportation, plus \$22.00 in commodities produced and will soon produce \$3.52 of electricity, and \$10.56 in recycled antifreeze and cleaning solvents. Also, each additional barrel per month increase in production requires us to purchase \$12.75 in capital. Thus each barrel generates \$70.40 in business, a real boost to any economy.

A law is needed to equalize the energy and environmental burden among all the states that now lies on just a few regions. Currently only four or five states have laws banning the landfill of filters. To demonstrate this unbalance a 150 mile radius around the hills of Charlotte, NC, has 11 times the tonnage of recycled oil filters as a similar circle around Pittsburgh, PA. They both have the same laws and guidelines. The Pittsburgh area even has a higher population and 18 times as many steel mills.

Some propose converting back to non-metallic cartridge filters as a solution, but this will not keep any more oil from the landfills for many reasons: 1. The filters will be wrapped during service in absorbents to prevent spillage and the canister needs to be separately drained and cleaned of loose metal and grit contaminates requiring two times more waste to be land filled. 2. The largest income for the recycler is the steel. Thus removing it cuts the recycling profits thus probably doubling the fees and drastically reducing the likeliness of recycling. 3. Many oil changers are refusing cartridge filter oil changes due to leakage and other service problems or are charging more. 4. Cartridge filters make it difficult or impossible to remove the large metal and grit particles from the motor. In all element filters the dirty oil enters the outer chamber then flows through the pleats and out the center tube. The large metal and grit particles settle in the outer chamber and do not reach the pleats. Thus if the outer chamber is not discarded then in must be cleaned. This not only is messy, difficult and time consuming it creates a high risk of these large particles, terminal to an engine, getting into the clean oil channel and flowing directly to the engine bearings causing an engine failure. One new General Motors design automatically drains this grit back to the crankcase to be pumped back very possibly by passing the filter during the next or subsequent cold starts causing engine failure. 5. Because many of the cartridge canisters open on top they increase the likeliness of dirt dropping into the clean oil channel and causing an engine failure. 6. It will also substantially add to the cost of new vehicles. 7. The vehicle has to be lifted anyway to access the oil drain plug and it is cleaner to have all used oil mess below. 8. Spin-ons are just as easy to standardize and take up less engine compartment space. 9. We don't think it will be accepted by the public anyway because speed, cost, cleanliness and convince is why everyone converted to spin-on filters in the '50s. Even most lawnmowers, motorcycles and small engines now use them. 10. Remember, 60 percent of filters are still changed by owners who will probably convert the vehicle to a metal spin-on anyway. 11. Also metal spin-ons will take 30 years to phase out. Therefore, the metal recycling requirements will not go away.

Back in 1993 when four states banned oil filters from landfills, street disposal fees were averaging \$110.00 per barrel. Currently, the technology and infrastructure has developed to drop this fee to a range of \$45 per drum to paying for the filters at \$20 per drum with a mean price of \$28 per drum. Nationally, in reasonably populated areas, street fees are about \$23 per drum, which is usually free as part of the used oil contract price. Like normal supply and demand laws, the larger the recycle volumes the cheaper the cost. We estimate that a national law will lower the costs to under \$20 per drum at the generating shop and under \$6 per drum delivered to the recycler as it has been for 8years in the states with landfill bans now. Thus we have come a long way and it now makes CENTS.

If oil filters are not a liability, why does Waste Management handpick out oil filters to prevent contamination of their own landfills. Also many trash collectors refuse to pickup trash from oil changers if they have filters in them.

The simple manifest trail in California is a very cost effective, efficient and thorough method to ensure every one is doing it correctly.

COSTING INFORMATION FOR CONGRESS TO MAKE INTELLIGENT DECISIONS ON RECYCLING FILTERS AND USED OIL

Vortex proposes that if a national law is passed, we will pick up filters in semi-load quantities anywhere within a 500-mile radius of Youngstown, Ohio for \$10 per barrel in bulk or \$80 per ton. We will also supply the handling equipment for terminals having two loads per month or more. This will include a forklift, barrel dumping equipment, and our own five or eight yard storage hoppers. Past the 500-mile radius, we will charge \$13 per barrel or \$104 per ton in bulk, with similar equipment, delivered to our eleven railroad collection points. We have become the largest filter recycler in the world. We started business only 4 years ago and are only at ¼ our current capacity. We, and other recyclers, can easily grow to meet the needs created by a landfill ban.

CHANGES NEEDED IN THE LAWS TO PROMOTE OIL AND OIL FILTER RECYCLING, CREATE A CLEANER ENVIROMENT AND CONSERVE OUR NATURAL RESOURCES

First I would like to demonstrate how over regulation totally obstructs the flow in the recycling loop. A 150 mile radius around the hills of Charlotte NC has 11 times the tonnage of recycled oil filters as a similar circle around Pittsburg PA. The PA area has more population density and 18 times the steel mills. They both have the same laws governing the shops with respect to recycling oil filters. Per Pennsylvania law, to collect used oil filters from these shops even though they can be trashed any way, requires a \$2,000.00 permit application, a \$10,000.00 minimum facility bond, and massive amounts of tabulation paperwork, in the Carolinas very little. In California, there is only a free over the phone application, and yearly manifest paper trail and facility inspections. There are only four Pennsylvania locations that we know of collecting used oil filters from the generators. San Diego, California alone has nine active collectors thus the easier states make it yields more competition and more recycling tonnages. States need to promote the recycling infrastructure by not taxing and regulating it to death. Remember, Pennsylvania permits filters to be trashed but controls collectors like nuclear waste grossly discouraging or preventing recycling. The PA DEP has one to four inspectors on average every seven weeks at our facility for a one to four hour inspection detaining one to three of our employee's. Our DEP tabulating paperwork and testing requires an additional fourteen hours per month thus if any one did collect they would give up out of frustration. This also is not wise spending of the PA dollars. Over regulation is very counter productive because it drives up costs and down profits and thus prevents recycling and competition.

Collectors should only need to register with the state and be facility inspected for cleanliness and for a manifest paper trail, no more then every quarter as long as they are in the recycling loop. This keeps it simple and competitive.

Generating businesses must be held responsible to trace their filters by manifest to their grave at the recycler to ensure 100% recycling. States should supply a list of approved collectors and recyclers. Containers should be labeled with generators name and start date. Auditors can easily roughly determine lack of compliance by matching purchases and/or invoices to recycle volumes at suspected non-complying shops. The other simple check is to view ones trash dumpster. Thus minimal manifest keeping of amounts and trails to the recycler is all that is required.

Filters should be in a dated container each time they are consolidated unless the facility can prove equivalent amounts have passed thru in the recycling loop in the last 90 days. This also limits useless paper work and costs thus intern promoting recycling.

Filters, 55-gallons and above, should only be allowed to be stored for 90 days to prevent taking, or avoiding of, the collection fees and not paying for proper disposal.

Recyclers must have documented cradle to grave disposal of all oil filter components to prevent land filling the containments in order to recycle only the steel and a fraction of the oil.

Filters should not have to be drained per current landfill federal laws if they are manifested in the total recycling loop because the oil is recycled at the processor anyway. This elimination of the draining labor and liability elimination makes recycling almost as cost effective as not for the shops thus promotes recycling.

To clarify and standardize existing laws all used oil filters drained or not, should qualify under the current scrap steel exemption federal laws for transportation and not be required to have any special placards or permits as long as there is not over 20% by volume in loose oil. The current transportation laws covering residual waste are more than adequate to ensure safe transportation. Any additions will just add unnecessary costs and discourage recycling. Any carelessly lost barrel of filters will have the traceable manifest name and date to easily trace the clean up liability that is covered under the cradle to grave laws. All this makes recycling simple, competitive and efficient.

Vortex suggests implementation a new national law progressively from the Northeast to the Southwest over a span of four years in monthly increments in order not to strain the infrastructure or disrupt the commodity markets.

All public oil changers generating more then 200 gallons of used oil per month should be forced to accept up to five gallons at a time of used oil and/or used oil filters from any consumer. This will promote private oil and filter recycling. A shop should refuse oil if it has an odor. Most typical contaminants can be detected by human smelling. It also is a good test for flashpoint and volatility. Legal used oil and filters have no fumes, thus very little real odor, very low volatility, and low halogen contaminants. Thus a simple sniff will detect most contaminants. The slight chance of contamination will be diluted by the large quantities of oil in the loop plus be grossly over weighted by the benefits of the large amounts of alternative energy recovered from the do-it-yourself oil changer. They are by far the largest source of oil pollution in the world. In California, shops are required to offer \$.14 per gallon for this used oil. Most every one refuses the money realizing the work that they were creating for the shop thus the payment is more a deterrent to recycling for the shop than an incentive for the generator. This is also a non-productive paper work nightmare.

All generating businesses should be required to keep a simple manifested paper trail to the filters finial destination, insuring 100% recycling and it should be checked no more then yearly by the state.

Shops not in compliance should be substantially fined for non-compliance.

The used oil produced is best converted into heating fuel rather than re-refined into lube stock because the suspended carbon soot, similar to charcoal, increases its heat value. Re-refining oil wastes this and much more energy as well as creating hazardous waste by products. As burner fuel, this oil will replace fuel oil produced from crude oil that instead will be refined more efficiently into lube stock. Thus this issue is best left to the current supply and demand controls.

Filters having less than 5% steel by weight and 1.2 quarts in size should be required to be recycled along with oily absorbents, rags and pigs, at a waste to electrical energy plant conserving another viable source of ALTERNATIVE FUEL. Automotive facilities should be required to have the same manifest paper trail for these materials to the grave as oil filters. These filters make recycling the typical oil filters less cost effective and efficient. Most have to be hand picked and sent to the same waste to energy loop any way making recycling more costly all the way down to the consumer.

Diesel fuel, well drained gasoline filters under 1.1 qt., hydraulic and transmission filters should all fall into the same category as engine oil filters. They are all similar energy and contaminating sources. No one has found a way to recover the fumes from gasoline filters and the minuet amount of residual gas dissolves in the oil during the mass dilution. A separate waste stream would be much cost prohibitive thus this is the simplest and best way to eliminate their environmental contamination also.

Tern plated filters should be dropped from the laws because they have been out of existence for 13 years, never to return due to the cost of lead handling. It just confuses everyone.

Oil filter containers containing less than 4 gallons of oil or less than 20% oil by volume should not be required to have secondary containment if stored on concrete slabs and covered from rain due to their only minuet risk of environmental contamination. This enables the generating shop, transporters, common carriers, environmental companies, waste haulers and recyclers all to be more cost effective thus promoting recycling. We know of no recorded environmental damage from oil filter transportation or storage spills.

We see no reason to require any special labeling of oil filter barrels or containers. Of all items stored in barrels, filters probably have the least risk of environmental damage while in their containers. Because they have a separate waste stream, this waste is seldom co-mingled or confused.

Frequently Asked Questions

Q: Why should I recycle?

A: Recycling the oil filters and motor oil from your car, truck, motorcycle, boat, or RV is one way that you can demonstrate your commitment to protect the environment for future generations while conserving energy and resources.

Q: What are the benefits of recycling?

A: Recycling keeps used motor oil from rivers, streams, or lakes. It also keeps oil out of our ground water supplies which can affect your drinking water. Recycling oil filters and oil saves a great alternative fuel source. It reduces our dependency on foreign oil, saves the steel and oil resources and recovers the heat energy from the paper, gasket and paint, all valuable resources.

Q: How much used oil and steel gets recycled?

A: Current research shows that 58% of all used oil filters are being dispensed into landfills. An oil filter that is not properly drained can contain from one-half pint (8 oz.) to a full quart (64 oz.) of used oil. A properly drained filter averages 6.2oz. of oil, 13.6oz of steel and .38 kilowatt-hrs of heat energy contained in the paper gasket and paint. A typical vehicle produces 2% of its own weight in oil filters in its life time.

Q: What is recycled motor oil used for?

A: Used motor oil can be economically converted into heating fuel oil for industrial ovens, kilns and furnaces, for power plants to generate electricity or as a marine fuel. Used motor oil can also be re-refined into lubricating oils that meet the same API/SAE specifications as virgin motor oil.

Q: What are recycled oil filters used for?

A: They are preferably compacted to remove as much oil as possible, and then the solids are re-melted by steel manufacturers to produce new steel products. The non-metallics are used as fuel to preheat the steel before melting to save on electrical melt energy. The oil becomes heating fuel oil.

Q: What if I don't recycle?

A: Used oil filters and oil not disposed of properly can end up in landfills, sewers, back yards, streams or storm drains. In all of these cases, soil, groundwater and even drinking water may be contaminated. Used oil poured down your sewer can damage your community's water treatment system, contaminate your drinking water and cost you money. In many areas improper disposal of used oil is a crime.

Important Internet Links



www.liquidrecyclers.org



www.earth911.com