

PPC 9495.1986(22)

USED OIL FOR INDUSTRIAL BURNERS

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Mr. Paul McFadden
1045 Archer Lane
Lansdale, Pennsylvania 19446

Dear Mr. McFadden:

I received your August 7 letter only late last week. Let me summarize your largely correct interpretations of the current Federal requirements for industrial burners of used oil.

Hazardous waste (solvent) mixing - Mixing any amount of a listed hazardous waste (such as the spent solvents you name) into a used oil creates a mixture that must be managed as a hazardous waste. The 1000 ppm halogen standard is simply the level at which EPA will presume (until rebutted) that used oils have been mixed with halogenated hazardous waste. The presumption could be rebutted by demonstrating, for example, that all halogens are inorganic. (If you are burning oils on-site, it should be easy for you to prevent solvent contamination.)

Burning hazardous waste mixtures - Hazardous waste combustion is more stringently regulated than used oil combustion (under the November 29 final rules). Facilities burning hazardous waste for energy recovery, however, are not regulated as incinerators. Hazardous wastes (including mixtures) can be burned only in industrial boilers and furnaces. An on-site burner is subject to Part 262 requirements for hazardous waste generators. The on-site burner is also subject to notification (§266.35(a)), and storage (§266.35(b)/§262.34) requirements. There may well be additional requirements in the future; however, these rules have not yet even been proposed.

Burning used oils (on-specification) - For used oils not mixed with hazardous waste, the regulations (§266.40(e)) define two types of used oil fuels: on-specification and off-specification. The combustion of on-spec used oil is unregulated, however, there are a few requirements for on-site burners to meet the exemption. (I admit these may be a bit unclear from a reading of the actual regulatory language.) First, the on-site burner must notify as "an on-site burners who first claims the oil meets specification." Second, the burner must be able to demonstrate that the oil (as burned) meets the specification. Lab analyses are certainly a good way of making such a demonstration. Note that the combustion itself is entirely unregulated by the used oil rules, that is, the oil may be burned in any type of device. There are no plans to regulate on-spec burning with future used oil rules.

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Burning used oils (off-specification) - Burning off-specification used oil is regulated more stringently (§266.44) than on-spec. Most importantly, off-spec used oil may be burned only in industrial devices, and only by facilities that have notified as "an off-spec used oil burner." In the future, there may be additional requirements to meet, such as, the use of air pollution control, or perhaps storage requirements. These additional regulations, however, have not yet been proposed.

I hope you have by now received my August 4 letter on testing procedures and labs. If you have any other questions, please contact me.

Sincerely,

Eric Males
Office of Solid Waste

ATTACHMENT I

Question 1: Why, when the "Banking of Lead Rights" was promulgated on April 2, 1985, (21 days after the public comment period closed for 40 CFR Parts 260, etc.) was there no mention, reference, or acknowledgement of its existence 8 months later in the November 29, 1985 Federal Register?

Response: Staff working on the final regulations published on November 29, 1985, were totally unaware of the lead credits program included in the April 2, 1985, "Banking of Lead Rights" final regulation. During development of the November 29, 1985 regulations, our staff was working to resolve all of the issues raised in public comments on the January 11, 1985, proposed regulations on the burning of hazardous waste fuel and used oil in boilers and industrial furnaces. Unfortunately they were not knowledgeable in the matter of the lead credits program first proposed in January 4, 1985 (50 FR 718). No commenters on our proposed rules raised the issue of the effect of the lead credits program on lead levels in used oil fuels. Thus, certain projections made by staff and published in the preamble to the November 29, 1985 final rules have proven to be inaccurate.

Question 2: Why was Table 4 and the entire dissertation surrounding it published in the November 29, 1985 Federal Register when the EPA Staff knew that it was inaccurate and misleading?

Response: Table 4, which projects how much used oil will meet various lead limits by May 1986, was derived without taking into account the lead credits. As explained above, the inaccurate projections were due to lack of knowledge by the staff writing that document of the lead credit provisions, and was certainly not a deliberate attempt to mislead the public. As shown in Table 5, on the same Federal Register page as Table 4, EPA also made projections of how much used oil would meet the entire used oil fuel specification, not just the lead specification. We projected that by May 1986, only 46% of all used oil would meet the used oil fuel specification without blending with virgin fuel oil. This is because we expected other elements of the specification, i.e., the limits for Arsenic, Cadmium, and Chromium of 5, 2, and 10 ppm, respectively, to cause significant amounts of used oil to be off-specification. The purpose of the specification is to identify used oil fuel with high levels of toxic contaminants compared to virgin fuel oil and to restrict the use of such contaminated fuel to industrial burners. We never intimated that any set percentage of used oil fuel must meet the specification; in fact, as discussed above, we expected that most used oil fuel would not meet the specification unless blended with virgin fuel oil.

Question 3: Why, when EPA readily admits in 49 CFR Part 80 that "--- the Agency estimates that about 9.1 billion grams would be banked" and that "--- the Agency does not expect that these regulations will have a significant adverse impact, if any, on the public health or the environment", does the small percentage of that lead (2.65%) flowing through the oil recycling industry pose a health risk?

Response: The amounts of lead allowed in gasoline cannot be directly compared to the amounts contained in used oil. First, the Agency's regulations of 49 CFR Part 80 are designed to reduce and perhaps eliminate the use of lead as a motor fuel additive (50 FR 9386; March 7, 1985). EPA indicated that a national health problem exists with regard to lead and that "... all reasonable efforts should be taken to reduce lead exposure to the population as rapidly as possible." (Id.) The Agency at first concluded that the refining industry as a whole could achieve a 0.1 grams per gallon limit by January 1, 1986 without the allowance of lead credits. EPA became convinced, however, that a more flexible but equally protective approach would be to impose a limit less stringent than 0.1 grams per gallon prior to January 1, 1986 (i.e., 0.5 grams per gallon on July 1, 1985), to impose the 0.1 limit on January 1, 1986, and then allow lead credits through 1987. The Agency reasoned that this accelerated schedule could be combined with a lead credits program and achieve the same lead reduction in 1985-1987 as imposing the 0.1 gram per gallon limit on January 1, 1986, with no lead credits (50 FR 718-719; January 4, 1985). Therefore, EPA did not simply conclude, as your letter suggest, that 9.1 billion grams of lead entering the environment would pose no problem. Rather, the Agency concluded that we could achieve the most rapid reduction through an accelerated phasedown schedule combined with a lead credits program.

The used oil fuel regulations serve a dual purpose. First, EPA concluded that under certain conditions the burning of used oil in boilers could cause violations of the National Ambient Air Quality Standard (NAAQS) for lead; the 100 ppm lead limit prevents the occurrences (50 FR 49184-49185; November 29, 1985). Further, EPA considered whether the used oil fuel regulations should be used as a supplement to the gasoline lead phasedown described above to reduce overall lead exposures, i.e., to go beyond what is necessary to prevent violations of the NAAQS and set an even lower lead limit. (Id.) As the Agency indicated, due to new health effects data on lead that may lead to a lowering of the NAAQS and the latter consideration, we are considering whether the 100 ppm limit should be lowered. (Id.) An important factor in this determination will be the likely impacts of a lower limit on the used oil recycling industry. Impacts on recycling will not, however, take precedence over health-based considerations.

Question 4: Why, when the National Ambient Quality Standard for lead at a 75% emission rate is currently 300+ ppm, has a 100 ppm specification been imposed upon the oil recycling industry?

Response: The enclosures to your letter (Exhibits IV, V, and VI) cite air modeling work performed for EPA in about 1980. The results indicate that under some conditions an individual burner can burn a fuel with over 100 ppm lead without exceeding at groundlevel the lead NAAQS of 1.5 micrograms per cubic meter. As EPA explained when it proposed and promulgated the 100 ppm limit, however, a number of factors must be considered besides single burner air modeling. (This is discussed in detail at 50 FR 1698; January 11, 1985, and 50 FR 49184, November 29, 1985.)

Used oil sources can be clustered, i.e., multiple sources can be located near one another, leading to increased ambient pollutant levels;

In urban areas, it is not unusual to have exposed individuals at elevated locations (e.g., in apartment houses) where pollutant levels may be higher;

Many areas already have lead in the air so used oil burners, while emitting only a fraction of the NAAQS, could add to the ambient levels and cause an exceedence of the NAAQS; and

The current NAAQS is under review by EPA. New health effects data indicate that lead is even more toxic than earlier studies indicated; and the NAAQS may therefore be lowered from the current 1.5 micrograms per cubic meter.

In summary, the 100 ppm lead limit for used oil is necessary to prevent violations of the NAAQS. In fact, the original study performed for EPA in 1980 recommended a lead specification for used oil of 50 ppm. Used Oil Burned as a Fuel, Volume I, Recon Systems, Inc. and ETA Engineering, Inc., 1980 (p. 1-8).

Question 5: Why has EPA so clearly discriminated against the oil recycling industry (as opposed to the major producers and importers of leaded gasoline) to the obvious detriment of the environment?

Response: EPA has not discriminated against used oil recyclers while favoring producers and importers of leaded gasoline. EPA has moved swiftly to reduce lead in gasoline and we may in the future prohibit lead as a gasoline additive. Used oil recyclers may market used oil containing any amount of lead to any industrial burner. We have imposed only minimal requirements

on the marketing and burning of used oil high in lead content to track the movement of a fuel which is substantially different from virgin fuel oil (e.g., virgin fuel oil rarely contains more than 1 ppm of lead), and which may pose a hazard when not burned in the proper device. This is entirely consistent with RCRA Section 3014, which requires EPA to regulate used oil recycling practices that potentially could harm human health or the environment.