



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUN 3 0 2011

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

Cindy Highsmith  
Trendgreen Associates LC  
3002 W Autumn Run Circle  
Sugar Land, Texas 77479

Dear Ms. Highsmith:

In your letter of April 7, 2011, you requested an opinion as to whether oil filter fluff that is burned in combustion units is a non-waste fuel in accordance with the requirements in 40 CFR part 241.3(b)(4). To be designated as a non-waste fuel under that section, the rule requires that the processing of the non-hazardous secondary material (NHSM) meet the definition of processing in 40 CFR 241.2. After processing, the NHSM must meet the legitimacy criteria in 40 CFR 241.3(d)(1). Based on the information provided in your letter, we would consider the oil filter fluff that is burned in combustion units as a non-waste fuel under 40 CFR part 241. The remainder of this letter provides the basis for our position.

Processing

Processing is defined in 40 CFR 241.2 as operations that transform discarded NHSM into a non-waste fuel or non-waste ingredient, including operations necessary to: remove or destroy contaminants; significantly improve the fuel characteristics e.g. sizing or drying of the material in combination with other operations; chemically improve the as-fired energy content; or improve the ingredient characteristics. Minimal operations that result only in modifying the size of the material by shredding do not constitute processing for the purposes of the definition.

In your letter, you state that the spent oil filters are collected then shredded to open and remove oil-soaked cellulose filter medium. The shredding process includes: a screen to ensure control of the oil filter material; shredding to a nominal size of 1 1/2 inches; and removal of free oil for management as on-specification fuel oil. The material is then passed over a magnet so that 99.5% of the metal is removed.

As the process used includes both shredding and removal of contaminants, it meets the definition of processing in 40 CFR 241.2.

### Legitimacy Criteria

Under 40 CFR 241.3(d)(1), the legitimacy criteria for fuels includes: 1) management of the material as valuable commodity based on the following factors - - storage prior to use must not exceed reasonable time frames and management of the material must be in a manner consistent with an analogous fuel, or where there is no analogous fuel, adequately contained to prevent releases to the environment; 2) the material must have meaningful heating value and be used as fuel in a combustion unit that recovers energy; and 3) the material must contain contaminants at levels comparable to or less than those in traditional fuels which the combustion unit is designed to burn. The term contaminants is defined in 40 CFR 241.2 as constituents in the NHSM that will result in emissions of air pollutants under Clean Air Act section 112(b) or the nine pollutants listed under Clean Air Act section 129, including those constituents that could generate products of incomplete combustion.

Regarding the first criterion, you state that the oil filters are processed within 24 – 48 hours of arrival,<sup>1</sup> and the processed oil filter fluff goes directly into a roll-off container or goes onto a permitted covered concrete pad and later placed in a roll-off for delivery. The oil filter fluff is then sold to cement plants, power plants and pulp and paper mills as an alternative fuel within 24 – 48 hours of processing.

Based on that information, the material is managed as a valuable commodity and storage does not exceed a reasonable time frame. Although no analogous fuel was identified, storage in a roll-off container or permitted covered concrete pad is adequate to prevent releases. Please note that the facilities receiving the material must also manage it as a valuable commodity for the material to remain a non-waste fuel.

Regarding the second legitimacy criterion on meaningful heating value, you state that the separated oil filter media (fluff) contains an average of between 12,000 to 13,000 Btu/pound. As discussed in the final rule, 5,000 Btu/pound was established as a general guideline for meaningful heating value. In addition, cement plants, power plants and pulp and paper mills recover energy from the use of this material as a non-waste fuel. Thus, the material meets this criterion.

Regarding the third criterion on contaminant levels, your letter states that the oil filter media meets the contaminant level criterion when compared to coal. We compared the oil filter contaminant data provided in your letter, repeated in the table below, to the contaminant data for

---

<sup>1</sup> As noted in the regulations, prior to processing, the oil filter material is considered a solid waste and is subject to the appropriate federal, state, and local regulations.

coal as outlined in the materials characterization paper "Traditional Fuels and Key Derivatives" ([www.epa.gov/epawaste/nonhaz/define/index.htm](http://www.epa.gov/epawaste/nonhaz/define/index.htm)).<sup>2</sup> Only those constituents identified in both your letter and the contaminant definition under section 241.2 are compared, and the detection limit for mercury in the fluff is presumed to be less than 1.8 mg/kg.

Constituent	Contaminant Level in Oil Filter Fluff (mg/kg)
Arsenic	0.631
Cadmium	1.34
Chromium	8.97
Lead	27.7
Mercury	ND
Nickel	4.27
Selenium	0.661
Sulfur	2100

As indicated, the oil filter media meets the legitimacy criterion for contaminant levels when compared to coal. This conclusion would not apply, however, if the unit combusting the material were not designed to burn coal.<sup>3</sup> This conclusion is also based on the assumption that additional constituents for which the oil filter media is not tested (such as antimony, cobalt, manganese, and nitrogen) are present at levels comparable to or less than those in coal based on your knowledge of the material. In a subsequent submission, you also provided data showing the oil removed from the oil filter media was on-specification used oil in accordance with 40 CFR Part 279 standards, thus indicating any oil residuals remaining in the filter media would meet the contaminant levels under the Part 279 standards.

Overall, based on the information provided in your letter, the oil filter media meets both the processing definition and the legitimacy criteria outlined above. Accordingly, we would consider this NHSM a non-waste fuel under 40 Part 241 standards.

Your letter also discussed whether the material should be the subject of a petition to the Regional Administrator for a non-waste determination. Neither a petition nor such a determination is necessary given your description of the oil filter media processing; product fuels from the processing of NHSMs may be used by a generator or sold for use by other facilities.

If you have any other questions, please contact George Faison of my staff at 703-305-7652.

---

<sup>2</sup> To the extent that additional data on the composition of coal is available to Trendgreen Associates LC to indicate additional variability in the characterization of coal, that data can also be used to support this conclusion.

<sup>3</sup> A unit designed to burn coal is one that would not require extensive modifications and retrofitting to burn coal.

Sincerely,

A handwritten signature in blue ink, appearing to read "James Berlow". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

James Berlow, Director  
Program Implementation and Information Division