



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

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OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

NOW THE  
OFFICE OF LAND AND  
EMERGENCY MANAGEMENT

Mr. Earl Lott  
Director, Waste Permits Division  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711

Dear Mr. Lott:

I am writing in follow-up to our December 10, 2018, conference call regarding use of scrap tires as fuel. On this call, and in previous discussions, the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA or Agency) have examined potential options under federal and state law to increase beneficial reuse of scrap tires as tire derived fuel (TDF) and to reduce threats from unlawful stockpiling.

The EPA concluded, in its March 2011 Non-Hazardous Secondary Materials (NHSM) final rule, that previously discarded tires that otherwise meet legitimacy criteria (40 CFR 241.3(d)) and have been shredded or chipped with a significant portion of the wire removed, would not be considered solid wastes and could be combusted in units meeting standards under the Clean Air Act section 112 for control of hazardous air pollutants. Abandoned whole scrap tires that do not undergo shredding or processing, a primary issue in our discussions to date, are considered a solid waste, and must be combusted in units meeting emission standards under Clean Air section 129 for solid waste incinerators. See 76 FR 15490.<sup>1</sup>

Overall, processing of discarded scrap tires into TDF consists of three main steps: shredding, screening and metal removal. The level of each is determined by the end user's needs and specifications (i.e., size of shreds and amount of metal removed). For shredding of scrap tires, equipment for tire processing generally comes in two types – slow speed opposing rotor and high-speed single rotor. Slow speed opposing rotor shredder or rotary shear shredder is used to produce the larger chip sizes suitable for applications such as cement kilns, shearing the tire into 2 to 5-inch size shreds and liberating between 2 and 10 percent of the bead wire contained within the tire. The high speed single rotor shredder (also known as a granulator) contains a rotor equipped with knives that shred the tire until they are of desirable size (e.g., less than 1 inch). Approximately 50 to 90 percent of the steel wire can be liberated using high speed shredders and magnets.

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<sup>1</sup> Whole tires that are not abandoned but are managed under Part 241 standards for Established Tire Collection Programs (i.e., a comprehensive collection system that ensures scrap tires are not discarded and are handled as valuable commodities) can be combusted as a non-waste fuel.

The March 2011 NHSM rule indicated that scrap tires that have been chipped or shredded, sorted, and de-wired (at least 90 percent wire free) would be considered sufficiently processed. However, to the extent that other unit types (e.g., cement kilns) require different levels of metal removal, less metal removal would qualify as processing if, according to product specifications appropriate for the combustion unit and to the degree practical, it is processed into TDF chips and enough wire is removed from the TDF. See 76 FR 15498.

The Agency has recognized that cement kilns can utilize metal contained in scrap tires as a component in their manufacturing process. In fact, the metal in scrap tires substitutes for iron that would otherwise be added to the process. Given the specific circumstances relevant to cement kilns as described above, and the NHSM rule's allowance for flexibility, processing consisting of at least one slow speed shredder, a screen, and magnet(s) to remove the liberated wire from 2 to 10 percent (rather than up to 90 percent), may also be considered a sufficient alternative. Such a level of processing would be appropriate for the cement kiln end-users' needs and specifications, while remaining consistent with the NHSM standards.

We appreciate your continued efforts to address abandoned tires through beneficial reuse. The EPA is committed to working with TCEQ, and I encourage you to develop a TDF pilot project to share with EPA in support of Texas's vision to significantly reduce scrap tires in an efficient and economical way. If you have additional questions, please contact George Faison at (703) 305-7652.

Sincerely,

A handwritten signature in black ink that reads "Barnes Johnson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Barnes Johnson  
Director  
Office Resource Conservation and Recovery

cc: RCRA Division Directors