



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, MCAAP
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

December 14, 2005

U-033-06

Ms. Abigail Power
Texas Commission on Environmental Quality
Region 13, San Antonio Office
14250 Judson Road
San Antonio TX 78233-4480

Subject: Request Regulatory Ruling on Recycling Lead Air Filters,
Camp Stanley Storage Activity, Boerne, Texas

Dear Ms. Power:

The Camp Stanley Storage Activity (CSSA), McAlester Army Ammunition Plant, U.S. Army Field Support Command, Army Materiel Command, U.S. Army is requesting a regulatory ruling that would promote a pollution prevention initiative of beginning to recycle the lead air filters CSSA uses at the facility indoor small arms range, which is a conditionally exempt small quantity generator (CESQG). The filters are part of a dust control unit that collects lead dust from the indoor firing area in the on-post fully enclosed small arms range. We generate approximately 200 pounds every other month. We are currently disposing of the material as hazardous waste, but would like to send the filters to a smelter for recycling. We ask for concurrence that such recycling would exempt this material from hazardous waste generation totals under the recycling exemption of the Resource Conservation and Recovery Act (RCRA) and state equivalent.

We have found a lead recycler who is willing to take our filters in Terrell, Texas. If the filters are considered a sludge/scrap metal, they should not be counted towards hazardous waste generation totals if they are recycled. We believe the attached information supports this position, but would like a regulatory interpretation confirming this.

CSSA is committed to maintaining a high degree of environmental stewardship and compliance with environmental laws and regulations. Please provide a short written concurrence or the name of a TCEQ POC in Austin who could clarify this issue. If you have any questions or comments, please feel free to contact Glaré Sanchez, Environmental Program Manager, at (210) 698-5208.

Sincerely,


Jason D. Shirley
Installation Manager

Attachments

cc: Mr. Greg Lyssy
EPA Region 6 (ltr)

Mr. Jorge Salazar
TCEQ Region 13 (ltr)

Mr. Jim Cannizzo
U.S. Army, Army Medical Command, Fort Sam Houston, Staff Judge
Advocate (ltr)

Ms. Julie Burdey
Parsons (ltr)

Ms. Kimberly Vaughn
Parsons, (Ltr)



ATTACHMENTS

RECYCLER INFORMATION

The lead recycler for consideration is ECS in Terrell, Texas near Houston, Texas. Address, website information, and excerpts below:

ECS Refining
105 Tejas Drive
Terrell, TX 75160
(972) 524-1075
Fax: (972) 563-0904 Ian Linton

<http://www.ecsrefining.com/pages/page.asp?s=2240&ss=2265&t=2281>

"ECS is both a smelter and refiner of tin and tin-lead alloys. We operate a large, 60-ton rotary furnace, as well as several smaller, special purpose furnaces, and both kettle and electrolytic refining processes."

FILTER INFORMATION

The filters consist of pre-filters and a main (HEPA) filter for a Shooting Ranges International (SRI) bullet trap that was installed in 2002 in Building 90 on Camp Stanley Storage Activity. The filters are made of paper with plastic housing and a small amount of metal reinforcing. The HEPA filter's parts number is MAGPB23F23FB50X and is 23.75" square. The pre-filter is pleated and is 24" x 24" x 2". CSSA purchases the filters from:

Dustless Air Company of San Antonio
11603 North Weidner Road
San Antonio, TX 78233
(210) 653-6901

<http://www.dustlessairfilter.com/home/>

ARTICLES

Excerpt from an article on the internet concerning recycling lead filters:

http://www.rangeinfo.org/resource_library/facility_mngmnt/environment/recycling_regulations.htm

Recycling Regulations

By Louis J. Magdits, Raw Materials Manager
Resource Recycling Division, The Doe Run Company

(This article is reprinted from the Third National Shooting Range Symposium, 1996 with permission from International Association of Fish and Wildlife Agencies, Wildlife Management Institute and U.S. Fish and Wildlife Service.)

The last material I would like to address are the indoor range filters. Based upon our actual receipts, they appear to be two types-metal box-frame HEPA (High Efficiency Particulate Air) and all-paper/cloth type cartridges. Going back to regulatory definitions, **air filters can typically meet the sludge definition**; and since sludge, when destined for recycling are exempt, the range owner may be exempted from the majority of RCRA regulations. These filters are not processed by all lead smelters. Prior to final installation, you may want to check with your intended lead facility.

EPA REGULATION ON SLUDGE

The potential regulatory hurdle is that spent materials are not discounted from hazardous waste generation totals. However, sludges are exempt and according to several sources, used filters from air pollution control devices should be considered sludges.

40 CFR Sec. 260.1 Purpose, scope, and applicability

(3) Section 260.10 defines terms which are used in parts 260 through 265 and 268 of this chapter.

40 CFR Sec. 260.10 Definitions

Sludge means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or **air pollution control facility** exclusive of the treated effluent from a wastewater treatment plant.

40 CFR §261.1 Purpose and scope

(c)(2) "Sludge" has the same meaning used in §260.10 of this chapter;

40 CFR Sec. 261.4 Exclusions

(a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this part:

(a)(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

40 CFR Sec. 261.6 Requirements for recyclable materials

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(a)(3) The following recyclable materials are not subject to regulation under parts 262 through parts 266 or parts 268, 270 or 124 of this chapter, and are not subject to the notification requirements of section 3010 of RCRA:

(a)(3)(ii) Scrap metal that is not excluded under Sec. 261.4(a)(13);

EPA Faxback (1999):

(1) Can the ion exchange filter, when spent and removed for reclamation, be considered a sludge (and therefore unregulated as a characteristic sludge being reclaimed under 40 CFR 261.2(c)(3))?

The regulatory definition of sludge is “any solid, semisolid, or liquid waste generated from a municipal, commercial or industrial waste water treatment plant, water supply treatment plant, or **air pollution control facility**, exclusive of the treated effluent from a waste water treatment plant” (40 CFR 260.10). Based on this definition and on your description of the use of the devices, the filter elements, while meeting the definition of “spent material,” also meet the definition of “sludge.” However, because the term “sludge” is a more narrow definition, the agency has consistently considered such “spent” filters to be sludges. (See, for example, the enclosed July 21, 1994 letter from D. Bussard to G. Weisjahn.)

[http://yosemite.epa.gov/osw/rcra.nsf/b36c11f3e4ba870485256d0900711760/2E05AB3AD56C49F285256817006E336F/\\$file/14331.pdf](http://yosemite.epa.gov/osw/rcra.nsf/b36c11f3e4ba870485256d0900711760/2E05AB3AD56C49F285256817006E336F/$file/14331.pdf)

EPA policy document confirming that bullet debris qualifies for scrap metal exclusion:

Appendix D: RCRA Regulatory Requirements and Interpretations

1. Reclaiming and Recycling Lead Shot

In a final rule published in the Federal Register on May 12, 1997 (62 Fed. Reg. 25997), the EPA excluded processed scrap metal from RCRA regulation with the intention of promoting the goal of safe recycling (40 CFR 261.4(a)(13)). Scrap metal (not requiring processing) being reclaimed and recycled was already exempt from RCRA Subtitle C regulation (40 CFR 261.6(a)(3)(ii)). Thus, the EPA clarified that the exclusion for processed scrap metal being recycled applies to the scrap metal that has undergone a processing step by the range owner or a reclaimer.

The term “sorted” was added to the definition of “processed scrap metal” (40 CFR 261.1(c)(10)) as a typical step used in scrap metal recycling. This definition also includes “manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials.” Lead shot/bullet reclamation at ranges falls under this type of activity.

The EPA “believes that processed scrap metal being recycled is distinct from other secondary materials defined as wastes when recycled due to established markets for the material’s utilization, inherent positive economic value of the material, the physical form of the material, and absence of damage incidents attributable to the material, and is therefore sufficiently product - like that maintaining RCRA regulatory jurisdiction over the material is not necessary.” (62 Fed. Reg. 26011) EPA’s Office of Solid Waste issued guidance in 1997

indicating that lead shot, when recycled, is considered a scrap metal and therefore exempt from RCRA regulation. A copy of the March 17, 1997 letter with this guidance is attached.

http://www.epa.gov/docs/Region2/waste/leadshot/bmp8_8.pdf#search='recycling%20lead%20bullet%20scrap%20metal'

TCEQ and TEXAS REGULATIONS

Excerpt from the TCEQ RG-234 pamphlet “Rules and Regulations for Small Quantity Generators” and TX regulations below:

How Do I Determine My Generator Status? (Page 13)

Do not measure waste that is:

- Specifically exempted from counting. Examples include lead-acid batteries that will be reclaimed, **scrap metal** that will be recycled, used oil that is managed under the used oil provisions of 40 CFR 279, and “universal wastes” (for example, lead-acid batteries, pesticides, and thermostats) managed under 40 CFR 273.

http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rg/rg-234_205899.pdf#search='texas%20small%20quantity%20generator%20234%20hazardous%20waste'

Texas Administrative Codes

30 TAC §335.78 Special Requirements for Hazardous Waste Generated By Conditionally Exempt Small Quantity Generators

(c) When making the quantity determinations of Subchapters A - C of this chapter (relating to Industrial Solid Waste and Municipal Hazardous Waste in General; Hazardous Waste Management General Provisions; and Standards Applicable to Generators of Hazardous Waste), the generator must include all hazardous waste it generates, except hazardous waste that:

- (1) is exempt from regulation under 40 Code of Federal Regulations (CFR) §261.4(c) - (f), §335.24(c) of this title (relating to Requirements For Recyclable Materials and Nonhazardous Recyclable Materials), §335.41(f)(1) of this title (relating to Purpose, Scope and Applicability), or 40 CFR §261.8;

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=78](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=78)

30 TAC §335.24 Requirements for Recyclable Material and Nonhazardous Recyclable Materials

- (2) scrap metal that is not already excluded under 40 CFR §261.4(a)(13);

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=24](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=24)

CALCULATIONS (To eliminate air permitting issues for the filters)

Emissions from the bullet traps were estimated using a mass balance technique. The amount solid material loaded on each HEPA filter was determined by weighing a filter both before and after one month of use. This weight (6 pounds) was then multiplied by 4 to determine the total mass loading for the building per month. The number of rounds of ammunition was also recorded for this same time period (1672 rounds). Taken together, the average loading rate for mixed ammunition types is 0.014 pounds/round. Assuming a 99.97 percent collection efficiency for the HEPA filters, the average emission rate from the building is 4.31 E-6 pounds/round.

Per 30 TAC §116.119(a)(3) facilities located inside a building at a site which emit substances at less than prescribed rates are considered to be de minimis and are therefore not required to be permitted. Conservatively using the lowest allowable emission rate and assuming the emissions are comprised of a single substance, CSSA would have to fire greater than 23,222,222 rounds of ammunition per year or 58,056 rounds per day in order to be above the de minimis limit:

Assume all loading to HEPA filters is lead

24	lbs/month	Monthly loading to all 4 HEPA filters
1,672	rounds/month	Firing rate
0.014	lbs/round	Pounds filter loading/round (mixed ammunition types)
0.9997		Collection efficiency of HEPA filters

Emission Rate per Round

4.31E-06	lb/round	
72,000	rounds/year	Anticipated Maximum Firing Rate
3.10E-01	lb/yr	

De Minimis Emission Rate [Assume lowest rates from 30 TAC 116.119(a)(3)]

0.05	tons/year
0.25	pounds/day

Maximum "Allowable" Mixed Firing Rates

23,222,222	Rounds/year
58,056	Rounds/day

While historical records have not been kept regarding the number of rounds fired, a conservative estimate from facility personnel is 6,000 rounds per month maximum. This is equivalent to 72,000 rounds per year, or 0.3% of the maximum allowable rate as determined above