

**EPA SUMMARY AND RESPONSE TO COMMENTS ON:
POLYCHLORINATED BIPHENYLS (PCBs); RECYCLING PLASTICS FROM
SHREDDER RESIDUE; REQUEST FOR PUBLIC COMMENTS
December 12, 2012 (77 FR 74006)
EPA-HQ-OPPT-2012-0902**

Introduction

On December 12, 2012, the Environmental Protection Agency (EPA) published a notice of request for public comment in the **Federal Register** (FR), entitled **Polychlorinated Biphenyls (PCBs); Recycling Plastics From Shredder Residue** (77 FR 74006). In this notice, EPA sought comment on an interpretation of its regulations under consideration that would generally allow for the recycling of plastic separated from shredder residue under the conditions described in the Voluntary Procedures for Recycling Plastic from Shredder Residue (Voluntary Procedures) [ISRI. Voluntary Procedures for Recycling Plastics from Shredder Residue, October 24, 2012], relying principally on the regulatory provision for “excluded PCB products” (40 CFR §761.3). The thirty-day public comment period for this notice closed on Friday, January 11, 2013.

In response to this notice, 28 unique public comments were submitted to the docket established for this action, docket identification (ID) number EPA-HQ-OPPT-2012-0902. The docket is available at <http://www.regulations.gov> or at the Office of Pollution Prevention and Toxics Docket. This document presents a brief summary of those comments, and where appropriate, EPA's response to particular issues raised.

Supportive Comments

Of these 28 unique public comments, 24 were generally supportive of EPA's interpretation. Positive comments were submitted by the Institute for Scrap Recycling Industries (ISRI), metal shredders, plastics and energy recyclers, industry and utility associations, consultants and law firms.

These supportive comments included a variety of positive environmental attributes associated with recycling plastics from shredder residue, such as: appreciably reducing the volume of shredder waste disposed of in landfills; saving virgin products (oil) used to make plastics; reducing emissions and other environmental impacts associated with virgin oil production; and achieving environmental benefits similar to those of recycling plastic resin from packaging materials, such as reductions of greenhouse gas emissions, energy use and waste.

Commenters also noted various economic benefits, from reducing shredders' operational costs and keeping the U.S. scrap industry globally competitive to providing economic benefits through investment and jobs in this new recycling sector. Several commenters noted there would be competitive benefits to other related industries, such as the automotive and plastics industry. Various commenters noted that the technology of recycling plastics from shredder residue is a developed technology that is proven, financially feasible, deployed globally and ready to implement in the United States.

Commenters who spoke to EPA's analysis of the PCB regulations concluded that EPA has made the necessary examination, findings and review to support its interpretation, and that treatment of plastics recovered from shredder residue as excluded PCB products would present no unreasonable risk to human health or the environment. Commenters also noted it was reasonable to conclude that PCBs present in shredder residue are from authorized sources <50 ppm.

Five commenters, while supportive of this interpretation, asked EPA to apply this or a similar interpretation to the use of shredder residue (or plastics separated from shredder residue) as a fuel: both to burn directly (e.g., in cement kilns), or to distill into fuel oil. In response, EPA notes that the interpretation explained in the FR notice, was developed by carefully considering the Voluntary Procedures ISRI developed. EPA interprets these procedures as providing that shredders will only provide residue to a plastic processor/producer/recycler, and only when that plastic processor/producer/recycler's contract states that both parties are following all applicable provisions of the Voluntary Procedures [See "Output Control Procedures," ISRI. Voluntary Procedures for Recycling Plastics from Shredder Residue, October 24, 2012]. Today's interpretation is based on EPA's understanding that plastic separated from shredder fluff will be recycled into plastic to be used in products. Therefore, the request for addressing shredder residue as fuel is outside the scope of the current interpretation. EPA also notes that the PCB regulations place restrictions on the burning of used oil for energy recovery beyond those applicable to other PCB products. 40 CFR § 761.20(e).

Critical Comments

One commenter expressed concern that shredders may stockpile fluff for plastic sorting and end up abandoning these stockpiles if they go out of business, leaving the state with costly cleanups. EPA believes this concern is unwarranted, as shredder residue is less likely to be abandoned if it has some market value as a source of recoverable plastics, as opposed to being a waste that incurs cost for disposal at a landfill. Further, the Voluntary Procedures are intended to ensure that the shredder residue does not originate from materials containing ≥ 50 ppm PCBs, so any abandoned stockpiles would be unlikely to contain regulated levels of PCBs subject to costly disposal measures.

This commenter also observed that shredders will not comply with the procedures if they are labeled as "voluntary," and therefore the word voluntary should be redacted from the title of the procedures. EPA notes in response that the Voluntary Procedures have been proposed by ISRI as measures their members may use to demonstrate conformity with the excluded PCB products exclusion. EPA is not imposing a regulatory mandate on shredders. However, EPA's interpretation makes it clear that following the Voluntary Procedures is necessary to generally treat the feedstock as consisting of excluded PCB products and that if shredders and suppliers do not follow the Voluntary Procedures, they will need to be able to otherwise demonstrate that the feedstock and residue meet the exclusion.

Two submissions (one submitted on behalf of nine NGOs) opposed the Agency's adoption of the interpretation.

One commenter asserted that EPA's action does not meet the no unreasonable risk and data development standards of sections 2(b)(1) and 2(b)(3) of the Toxic Substances Control Act (TSCA). EPA's reply is that it is interpreting regulations that were issued pursuant to the PCB-specific provisions in TSCA § 6(e). The provisions of TSCA § 2(b) are not requirements, but statements of policy to guide the Agency in its implementation of the Act. EPA believes that the regulations promulgated at 40 CFR Part 761 and interpreted in the FR notice are consistent with these policies. The Agency did make "no unreasonable risk" findings when promulgating the regulations, and such findings necessarily incorporated EPA's consideration of information related to the risks, costs, benefits, and other impacts of the manufacture, processing, distribution in commerce, and use of PCBs. EPA notes that this interpretation is also consistent with the policy statement in TSCA § 2(b)(3) that the Agency should exercise its authority "in such a manner as not to impede unduly or create unnecessary economic barriers to technological innovation."

One commenter asserted, without elaboration, that EPA needs to explain why its interpretation does not violate the Stockholm Convention. The United States is not a party to the Convention, but EPA nonetheless believes there are no inconsistencies between this interpretation of 40 CFR §761.3 and the convention, which the United States has signed but not ratified.

One commenter asserted that plastic recyclers have the burden of demonstrating that the material is an excluded PCB product and relieving recyclers of this burden is unlawful. EPA, in promulgating the definition of excluded PCB products, intended to provide a meaningful way for existing products with low levels of PCBs, which were lawful when manufactured, to generally continue to be used, processed and distributed in commerce. The burden of demonstrating eligibility for a regulatory exclusion was raised and discussed in the FR notice. In summary, EPA believes that, for shredders and their suppliers that follow the Voluntary Procedures, it is appropriate to generally treat the feedstock as consisting of excluded PCB products unless there is information specifically indicating that the feedstock does not qualify. If shredders and suppliers do not follow the Voluntary Procedures, they will need to be able to otherwise demonstrate that the feedstock and residue meet the exclusion.

Both commenters asserted that it is inappropriate and unlawful for EPA to amend its regulations through the proposed regulatory interpretation and that EPA is adding an unlawful regulatory exemption and new rule without sufficient notice and comment or required regulatory analysis and data. As discussed in the FR notice, EPA is interpreting the application of an existing regulatory definition to activities within a set of specific circumstances (i.e., recycling plastic materials recovered from shredder residue at shredder facilities that follow the Voluntary Procedures). Interpretations of this nature do not constitute new or amended rules, but in this case EPA issued the FR notice and provided an opportunity for comment in the interest of regulatory transparency and public participation.

One commenter asserted that EPA must determine how the excluded manufacturing process (EMP) exclusion applies to plastic from auto shredder residue (ASR), especially as it is not clear why the "recycling" of plastic from ASR would not constitute "manufacturing" subject to EMP requirements. In the FR notice, EPA mentioned the possible applicability of the existing EMP exclusion to the recycling of plastic from auto shredder residue. EPA went on to explain that'

based on examination of available data on PCBs associated with plastics recovered from shredder residue and the lack of EMP notifications from manufacturers of plastics, it is less likely that PCBs that have been found are associated with plastics result from an excluded manufacturing process. EPA also notes that items that contain PCBs that result from an EMP can be used, processed and distributed in commerce to the same extent as excluded PCB products.

One commenter maintained that the procedures and interpretation are contrary to law because they permit dilution of PCBs. EPA disagrees. Excluded PCB products are defined to include only materials that contain <50 ppm PCBs, and where such concentration is not the result of dilution. The PCB regulations generally prohibit the circumvention of regulations through dilution (40 CFR §761.1). The interpretation is based on the judgment that following the Voluntary Procedures can prevent the introduction of PCBs at levels ≥ 50 ppm. So long as any PCBs <50 ppm in shredder residue are the result of shredding excluded PCB products, they are not the result of prohibited dilution. Where feedstock contains any source of ≥ 50 ppm PCBs, the resulting shredder residue cannot be considered to be an excluded PCB product.

One commenter asserted that EPA must perform an Environmental Justice analysis and address any impacts, asserting that shredders are located disproportionately in low income and minority communities. EPA notes that the interpretation is of existing PCB regulations and is not expected to change the location of existing shredder facilities. EPA also notes that the purpose of the Voluntary Procedures is to prevent the introduction of ≥ 50 ppm PCBs into shredders operations, and use of the procedures could thereby reduce the amount and/or release of PCBs at existing shredder facilities that choose to adopt them. EPA also notes that the interpretation may reduce the quantity of plastic recovered from shredder residue sent to landfills, which, like shredder operations, are often located in low income and minority communities, and in this respect may have a beneficial environmental justice impact.

One commenter presented a narrative that scrap metal recyclers have been responsible for numerous cases of air, water and soil contamination and the release of hazardous/toxic materials, including from fires. The commenter further asserted that PCB-containing materials will continue to be disposed of and processed at these facilities, causing PCB contamination of recovered plastics, and that the extent to which handling of these PCB contaminated materials contributes to health and environmental problems is unknown. EPA considers the general observations about the state and practices of the scrap metal recycling industry overall to be beyond the scope of this interpretation, which concerns the regulatory status of excluded PCB products in shredder residue, not the operations of the shredding facilities generally. EPA notes that most of the commenter's examples of PCB materials that may be scrapped are already regulated for disposal as PCB waste under 40 CFR Part 761 Subpart D. The purpose of the Voluntary Procedures developed by ISRI is to screen incoming materials so that no sources of ≥ 50 ppm PCBs will be in waste feedstock accepted by the shredder; therefore, the impact of this interpretation on shredder operations will be to reduce the likelihood that ≥ 50 ppm PCBs would be received and (mis)managed by such facilities.

Commenters asserted that EPA must gather and analyze additional data on health and environmental impacts, noting a lack of available data on the source and impact of PCBs in shredder residue, as well as details of shredder operations. In the FR notice, EPA acknowledged

uncertainty as to the source of the PCBs in shredder residue, but believes that, for shredders and their suppliers that follow the Voluntary Procedures, it is appropriate to generally treat the feedstock as consisting of excluded PCB products unless there is information specifically indicating that the feedstock does not qualify. EPA believes that the interpretation is consistent with the intent behind existing EPA regulations regarding excluded PCB products and notes that in promulgating the excluded PCB product rule, the Agency determined that the use, processing, and distribution in commerce of products with <50 ppm PCB concentration will not generally present an unreasonable risk of injury to health or the environment. 53 FR 24210 (June 27, 1988).

One commenter cited a 2002 California State report [California Department of Toxic Substances Control. California's Automobile Shredder Waste Initiative, Draft Report, November 2002] as evidence that PCB levels >50 ppm can be found in automobile shredder residue, and further noted that a 2009 Argonne National Laboratory (ANL) report [Argonne National Laboratory. Recycling End-of-Life Vehicles of the Future, December 1, 2009] indicates PCBs at ppm levels are routinely found in ASR. EPA reviewed both of these reports in considering its interpretation. The California report found ≥ 50 ppm PCBs in 2 samples out of 70 taken from 3 shredder facilities in 2001, and also noted a "downward trend" in PCB levels compared to data from 1986 [See p. 22, California Department of Toxic Substances Control. California's Automobile Shredder Waste Initiative, Draft Report, November 2002]. The California report provides no information to assess the operating practices of the facilities sampled, so EPA cannot judge how relevant the data are to facilities following the Voluntary Procedures. This downward trend, noted by EPA in the FR notice, is supported by the 2009 ANL results, which are all well below 50 ppm. The trend is further supported by the 2010/2011 data provided by ISRI: of approximately 100 samples of shredder residue, most were <2 ppm and none contained >10 ppm PCBs [ISRI. Summary of Analysis Done on Plastics Recovered from Shredder Aggregate, Late 2010/Early 2011].

One commenter stated that EPA should consider a prohibition on the use of recycled plastics from auto shredders for use in the manufacture of toys, food, drink containers or any products with oral applications, and in addition, EPA must specifically consider potential impacts on children's health from exposure to PCBs in recycled plastics, particularly because plastic is commonly a component of products used by children. EPA notes in response that the Voluntary Procedures include precautionary measures to include provisions in the plastics sales contracts with customers of companies subject to the interpretation expressly stating that such plastic are not suitable for use in the manufacture of toys, food or drink containers, or products intended for oral applications. In addition, EPA again notes that the Voluntary Procedures have been proposed by ISRI as measures their members may use to demonstrate conformity with the excluded PCB products exclusion. EPA is not imposing a regulatory mandate on shredders. Finally, many products with potentially high exposures (e.g., food and drink containers, toothbrushes, teething rings), are regulated by the U.S. Food and Drug Administration and are not within the definition of "chemical substance" under TSCA § 3.

One commenter asserted that the Voluntary Procedures are far too lax to ensure such recycling does not present an unreasonable risk of injury to health or the environment, and listed various examples of missing requirements (e.g., certification, labeling, sampling, attestations,

notification). As presented in the FR notice, EPA believes that, for shredders and their suppliers that follow the Voluntary Procedures, it is appropriate to generally treat the feedstock as consisting of excluded PCB products unless there is information specifically indicating that the feedstock does not qualify. EPA believes that the interpretation is consistent with the intent behind existing EPA regulations regarding excluded PCB products and notes that in promulgating the excluded PCB product rule, the Agency determined that the use, processing, and distribution in commerce of products with <50 ppm PCB concentration generally will not present an unreasonable risk of injury to health or the environment. 53 FR 24210 (June 27, 1988).

One commenter, citing a report on polyvinyl chloride as building material, asserted that PVC when heated produces PCBs and dioxins. The Thornton report indicates that dioxins are produced when PCBs are subjected to high temperatures in accidental fires, smelters and inefficient combustion and incineration [Thornton, Joe. Environmental Impacts of Polyvinyl Chloride Building Materials, 2002]. Based on comments received from plastic recycling companies on the 2010 ANPRM [75 FR 17645 (April 7, 2010); EPA-HQ-OPPT-2009-0757-0186], EPA believes that the formation of PCBs and dioxins at temperatures used to recycle plastics is unlikely.

One commenter expressed the opinion that visual inspection is inadequate to ensure that crushed cars going to a shredder do not have PCB capacitors or other PCBs. EPA notes that the Voluntary Procedures stipulate that suppliers of compacted feedstock such as crushed cars implement a documented source control program that includes visual inspection of all material *prior to compaction*.

One commenter questioned the basis for the 10 ppm threshold for shredders to notify EPA specified in the Voluntary Procedures. According to data provided by ISRI, no samples of plastic were found containing >10 ppm PCBs [ISRI. Summary of Analysis Done on Plastics Recovered from Shredder Aggregate, Late 2010/Early 2011]. EPA notes that this threshold reporting proposed by ISRI in the Voluntary Procedures is well below the regulatory limit specified in the definition of excluded PCB products (<50 ppm PCBs).

References

ANL. Recycling End-of-Life Vehicles of the Future, December 1, 2009.

California Department of Toxic Substances Control. California's Automobile Shredder Waste Initiative – Draft Report, November 2002.

ISRI. Summary of Analysis Done on Plastics Recovered from Shredder Aggregate, Late 2010/Early 2011.

ISRI. Voluntary Procedures for Recycling Plastics from Shredder Residue, October 24, 2012.

Thornton, Joe. Environmental Impacts of Polyvinyl Chloride Building Materials, 2002.