

ORAL ARGUMENT NOT YET SCHEDULED

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 11-1189 (and consolidated cases)

SOLVAY USA, INC., et al.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al.,

Respondents.

**On Petition for Review of Final Action of the
United States Environmental Protection Agency**

**BRIEF FOR RESPONDENT UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY**

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November 12, 2014

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PROTECTION AGENCY, et al.,)	
)	
Respondents.)	
)	

RESPONDENTS' CERTIFICATE OF COUNSEL

Pursuant to Circuit Rule 27(a)(4), counsel for Respondent United States Environmental Protection Agency ("EPA") submits this certificate as to parties, rulings, and related cases.

(A) Parties and Amici

(i) Parties, Intervenors, and Amici Who Appeared in the District Court

This case is a petition for review of final agency action, not an appeal from the ruling of a district court.

(ii) Parties to These Cases

The parties to these consolidated cases are listed in the Brief of Industry Petitioners.

(B) Rulings Under Review

The Agency actions under review are “Identification of Non-Hazardous Secondary Materials that are Solid Waste,” published at 76 Fed. Reg. 15,456 (March 21, 2011), and “Non-Hazardous Secondary Materials,” published at 78 Fed. Reg. 9112 (Feb. 7, 2013).

(C) Related Cases

The case on review has not been previously before this Court or any other Court. The Court has ordered that this case be heard by the same panel as *United States Sugar Corp. v. EPA*, No. 11-1108; *American Chemistry Council v. EPA*, No. 11-1141; and *American Forest & Paper Ass’n v. EPA*, No. 11-1125.

Respectfully submitted,

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GLOSSARY

<i>ABR</i>	<i>Association Battery Recyclers, Inc. v. EPA</i> , 208 F.3d 1047 (D.C. Cir. 2000)
<i>AMC I</i>	<i>American Mining Congress v. EPA</i> , 824 F.2d 1177 (D.C. Cir. 1987)
<i>AMC II</i>	<i>American Mining Congress v. EPA</i> , 907 F.2d 1179 (D.C. Cir. 1990)
<i>API I</i>	<i>American Petroleum Institute v. EPA</i> , 906 F.2d 729 (D.C. Cir. 1990)
<i>API II</i>	<i>American Petroleum Institute v. EPA</i> , 216 F.3d 50 (D.C. Cir. 2000)
EPA	United States Environmental Protection Agency
NACWA	<i>National Association of Clean Water Agencies v. EPA</i> , 734 F.3d 1115 (D.C. Cir. 2013)
NRDC	<i>Natural Resources Defense Council v. EPA</i> , 489 F.3d 1250 (D.C. Cir. 2007)
RCRA	Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 <i>et seq.</i>
Rule	“Identification of Non-Hazardous Secondary Materials That Are Solid Waste,” 76 Fed. Reg. 15,456 (Mar. 21, 2011) and “Non-Hazardous Secondary Materials That Are Solid Waste,” 78 Fed. Reg. 9112 (Feb. 7, 2013)

JURISDICTION

The Court has jurisdiction pursuant to 42 U.S.C. § 7607(b)(1).

STATEMENT OF ISSUES

The Resource Conservation and Recovery Act (“RCRA”) applies specified waste management requirements to materials defined as “solid waste.” The most stringent RCRA requirements apply to “hazardous” solid wastes, but this case only involves “non-hazardous” solid wastes. One of the principal questions in determining whether a given non-hazardous by-product of a commercial or industrial process (referred to in this rulemaking as “non-hazardous secondary materials”) is subject to regulation as a RCRA “solid waste” is whether or not the material has been “discarded.” Under the Act and this Court’s precedents, secondary materials that continue to be used as useful products or to make useful products are, under many circumstances, not considered to be “discarded.” In this rule, EPA carefully examined secondary materials produced in a variety of commercial and industrial processes and determined whether they are, or are not, appropriately considered to be “solid waste” under this framework. Against this background, this case presents the following questions:

1. Whether EPA’s regulations are consistent with the requirements of RCRA where they provide that non-hazardous secondary materials that are managed as commodities, have meaningful energy recovery value, and have

contaminant levels comparable to the fuels they replace, are not “solid waste” when burned for energy recovery.

2. Whether EPA’s regulations are consistent with the requirements of RCRA where they provide that fuels produced or extracted from non-hazardous secondary materials are product fuels (and hence not “solid waste”), provided they are managed as commodities, have meaningful energy recovery value, and have contaminant levels comparable to the fuels they replace.

3. Whether EPA acted consistently with RCRA in classifying used oil that meets specified maximum contaminant levels and clean cellulosic biomass as traditional fuels rather than “solid waste.”

4. Whether EPA acted consistently with RCRA in determining that used tires that are not discarded and are managed under the oversight of established tire collection programs are not “solid waste” when used as fuel in a combustion unit.

5. Whether EPA reasonably distinguished between non-hazardous secondary materials that remain within the control of the generator and those that are transferred to other parties in determining whether such non-hazardous secondary materials are solid waste when combusted for energy recovery.

6. Whether EPA’s determination that sewage sludge is “solid waste” when combusted is consistent with the requirements of RCRA.

STATUTES AND REGULATIONS

Applicable statutes and regulations are contained in the Addendum to Industry Petitioners' Brief.

STATEMENT OF THE CASE

Petitioners seek review of EPA actions entitled “Identification of Non-Hazardous Secondary Materials That Are Solid Waste,” 76 Fed. Reg. 15,456 (Mar. 21, 2011) (JA 72), and “Non-Hazardous Secondary Materials That Are Solid Waste,” 78 Fed. Reg. 9112 (Feb. 7, 2013) (JA 195) (collectively “Non-Hazardous Secondary Materials Rule” or “Rule”). In these rules, EPA established standards and procedures to be used to identify whether non-hazardous secondary materials are solid wastes when used as fuels or ingredients in combustion units regulated under sections 7412 and 7429 of the Clean Air Act. 42 U.S.C. §§ 7412, 7429. For purposes of this rule, “secondary material” is defined as “any material that is not the primary product of a manufacturing or commercial process, and can include post-consumer material, off-specification commercial chemical products or manufacturing chemical intermediates, post-industrial material, and scrap.” 40 C.F.R. § 241.2.

I. STATUTORY AND REGULATORY BACKGROUND

A. Clean Air Act

Although the Non-Hazardous Secondary Materials Rule was promulgated under RCRA, its primary effect is on EPA's implementation of two provisions of the Clean Air Act, 42 U.S.C. §§ 7412 and 7429, which require EPA to promulgate standards to control emissions of hazardous air pollutants from stationary air pollution sources. Clean Air Act section 7412 requires EPA to regulate emissions of hazardous air pollutants, which are "pollutants which present, or may present, . . . a threat of adverse human health effects . . . or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise." 42 U.S.C. § 7412(b)(2). Clean Air Act section 7429 requires promulgation of technology-based performance standards for solid waste incineration units to control nine pollutants, some of which are also listed as hazardous air pollutants under section 7412. 42 U.S.C. § 7429. A "solid waste incineration unit" is "a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)." *Id.* § 7429(g)(1). As a result, whether a combustion unit is regulated under section 7412 or 7429 depends on whether it burns material classified as solid waste. The

term “solid waste” is to have the meaning established by EPA under RCRA. *Id.* § 7429(g)(6).

The technology-based requirements in both sections 7412 and 7429 require that EPA establish emissions limitations based on a standard commonly known as Maximum Achievable Control Technology. *See Sierra Club v. EPA*, 167 F.3d 658, 660 (D.C. Cir. 1999) (describing the standard in section 7429); *Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 631 (D.C. Cir. 2000) (noting that section 7429 establishes “emission requirements virtually identical to section [7412’s].”). Section 7429(h) of the Act precludes EPA from regulating the same sources under both provisions. 42 U.S.C. § 7429(h). These standards are based on performance of existing facilities within the same category. *Id.* §§ 7412(d)(3), 7429(a)(2). The rule at issue in this case – the Non-Hazardous Secondary Materials Rule – provides standards and procedures for determining whether non-hazardous secondary materials are solid waste when combusted for energy recovery or used as ingredients. Facilities that burn solid waste are classified as “solid waste incineration units,” both for the purpose of compliance with the applicable standards and for determining the universe of facilities used to establish the standards. *Natural Res. Def. Council v. EPA*, 489 F.3d 1250, 1261-62 (D.C. Cir. 2007) (“NRDC”).

On the same day that EPA promulgated the Non-Hazardous Secondary Materials Rule, it also promulgated standards under Clean Air Act section 7412 for major and area source boilers, 76 Fed. Reg. 15,608 (Mar. 21, 2011) (major source boilers); 76 Fed. Reg. 15,554 (Mar. 21, 2011) (area source boilers); and promulgated standards under section 7429 for commercial and industrial solid waste incineration units, 76 Fed. Reg. 15,704 (Mar. 21, 2011). These rules, and subsequent revisions to the rules after reconsideration, are the subject of petitions for review in *United States Sugar Corp. v. EPA*, No. 11-1108, *American Chemistry Council v. EPA*, No. 11-1141, and *American Forest & Paper Ass’n v. EPA*, No. 11-1125, respectively. The Court has ordered that those cases and this one be heard by the same panel. ECF No. 1461584.

B. Resource Conservation and Recovery Act

RCRA, 42 U.S.C. §§ 6901-6992k, is the primary federal statute addressing the management of solid waste. The statute defines “solid waste” as “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations” 42 U.S.C. § 6903(27). The statute creates a comprehensive federal program for the management of “hazardous waste” in Subtitle C of the statute, *id.* §§ 6921-39f. Hazardous waste is “a solid

waste" that "may . . . pose a substantial present or potential hazard to human health or the environment when improperly . . . managed." *Id.* § 6903(5).

The Non-Hazardous Secondary Materials Rule, however, is concerned with *non-hazardous* secondary materials that may be, or may not be, solid waste. While regulatory responsibility for non-hazardous waste lies mostly with the States, EPA does have a role to play, as provided in RCRA Subtitle D, *id.* §§ 6941-49a. As described above, the Rule established standards and procedures to be used to identify whether non-hazardous secondary materials are solid wastes when used as fuels or ingredients in combustion units regulated under the Clean Air Act.

This Court has on several occasions addressed the question of whether a particular recycling or reclamation process constitutes "discard," which is a prerequisite for a material to be regulated as a solid waste. *See Am. Mining Cong. v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987) ("AMC I") (secondary materials that are reused in an ongoing production process are not "discarded" and thus are not solid or hazardous waste); *Am. Petroleum Inst. v. EPA*, 906 F.2d 729 ("API I") (D.C. Cir.1990) (*AMC I* is not applicable to materials that have been discarded prior to reclamation); *Am. Mining Cong. v. EPA*, ("AMC II") 907 F.2d 1179 (D.C. Cir. 1990) (same); *Ass'n of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1053 (D.C. Cir. 2000) ("ABR") (reuse of materials does not have to be immediate to be considered to have occurred as part of an ongoing production process); *Am.*

Petroleum Inst. v. EPA, 216 F.3d 50, 55-58 (D.C. Cir. 2000) (“*API II*”) (EPA failed to adequately explain why residual oil extracted from primary wastewater treatment at petroleum refineries had been discarded, rather than being part of an ongoing production process); *Safe Food & Fertilizer v. EPA*, 350 F.3d 1263, 1269 (D.C. Cir. 2003) (secondary materials that are “indistinguishable in the relevant respects” from commercial products are appropriately regulated as products).

Other Circuits have also addressed the issue. *See Owen Elec. Steel Co. of S.C. v. Browner*, 37 F.3d 146 (4th Cir. 1994) (a material that has been discarded can be regulated as a solid waste during recycling or reclamation); *United States v. ILCO, Inc.*, 996 F.2d 1126 (11th Cir. 1993) (a material that has been discarded can be regulated as a solid waste during recycling or reclamation even if the product of the recycling or reclamation process is no longer a solid waste).

While those cases arose in the context of hazardous waste regulation, the statutory definition of solid waste applies to both hazardous and non-hazardous waste, and provides the legal context for EPA’s determinations in the Non-Hazardous Solid Materials Rule.

C. The Non-Hazardous Secondary Materials Rule

EPA first addressed the question of the definition of “solid waste” for the purpose of determining the scope of regulation under Clean Air Act section 7429 in the “Commercial and Industrial Solid Waste Incineration Units Definitions

Rule,” 70 Fed. Reg. 55,568 (Sept. 22, 2005). In that rule, EPA defined “commercial and industrial solid waste incineration unit” in relevant part as “any combustion unit that combusts commercial or industrial waste.” 70 Fed. Reg. at 55,580. The rule defined “commercial or industrial waste” as solid waste “that is combusted at any commercial or industrial facility using controlled flame combustion in an enclosed, distinct operating unit: Whose design does not provide for energy recovery . . . ; or operated without energy recovery” *Id.* at 55,581; *see NRDC*, 489 F.3d at 1258. Thus, that rule focused on the facility’s intent in burning the secondary material, rather than on whether the secondary material had been discarded, in determining whether the facility should be classified as an incinerator. This Court vacated and remanded that rule, holding it to be inconsistent with the statutory definition of “solid waste incineration unit,” which the Court held to “unambiguously include among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all.” *Id.* at 1257-58. Thus, even if the facility burns secondary material for energy recovery – that is, as a fuel – it could be regulated under section 7429 of the Clean Air Act if that fuel is a waste.

The vacatur of the 2005 definitional rule resulted in the Court also vacating the standards established under sections 7412 and 7429 of the Clean Air Act, 42 U.S.C. §§ 7412, 7429. *NRDC*, 489 F.3d at 1261-62. Because emission standards

are based on the performance of sources within each category and because a revised definitional rule would change the distribution of sources between “boilers” and “solid waste incineration units,” the Court concluded that the emission standards for those categories would also likely change, and therefore vacatur of the standards was appropriate. *Id.* The Non-Hazardous Secondary Materials Rule establishes criteria for determining what materials are solid waste when combusted, and thus whether units combusting those materials are boilers or solid waste incinerators for purposes of regulation under the Clean Air Act.

In the Non-Hazardous Secondary Materials Rule, EPA promulgated criteria for distinguishing secondary materials for which combustion constitutes discard, even if there is energy recovery, and fuels produced from secondary materials that are not discarded, and thus legitimately classified as product fuels when combusted. Those criteria are based on the manner in which the material is managed, the heating value of the material, and the level of contamination in the material. Discarded materials are solid wastes, and combustion of such secondary materials makes the combustion unit a solid waste incineration unit regulated under Clean Air Act section 7429, 42 U.S.C. § 7429. Product fuels may be combusted in boilers regulated under Clean Air Act section 7412, 42 U.S.C. § 7412.

EPA began the rulemaking by publishing an Advanced Notice of Proposed Rulemaking, in which it sought comment on its general approach to determining

what secondary materials are solid waste when combusted. 74 Fed. Reg. 41 (Jan. 2, 2009) (JA 1). A proposed rule was published June 4, 2010 (75 Fed. Reg. 31,844) (JA 22), and the final rule was published on March 21, 2011 (76 Fed. Reg. 15,456) (JA 72). During this process EPA solicited comment from the public both on the criteria to be used in determining which materials should be considered solid waste when combusted as fuels, and on whether specific materials should be so classified. *See, e.g.*, 76 Fed. Reg. 15,477-15,516 (JA 93-132). EPA evaluated numerous categories of materials to decide whether they are solid wastes or product fuels when burned for energy recovery on the basis of the legitimacy criteria, *i.e.*, management of the materials as valuable commodities, fuel value, and levels of contamination. In the 2011 final rule, EPA evaluated 11 specific categories of materials to decide whether they are traditional fuels, product fuels, or wastes when burned for energy recovery whether burned on-site, burned after transfer to other parties, or processed from discarded secondary materials. 76 Fed. Reg. at 15,477-15,516 (JA 93-132).

In response to comments from the public claiming that certain materials should be considered product fuels based on the criteria established in the Rule, EPA engaged in further rulemaking, which resulted in amendments to the March 2011 Rule that were published on February 7, 2013. 78 Fed. Reg. 9112 (JA 195).

The amendments clarified the implementation provisions of the Rule and added categorical non-waste determinations. *See* 78 Fed. Reg. at 9135-38 (JA 218-21).

EPA has continued to receive information concerning the appropriate classification of non-hazardous secondary materials, and on April 14, 2014, EPA proposed to amend the Rule by adding additional materials to the list of categorical non-waste fuels. 79 Fed. Reg. 21,006 (April 14, 2014). In addition, pursuant to the Rule, EPA has received a number of petitions to make additional categorical determinations. *Id.* at 21,010; 21,021 n.69. EPA is in the process of considering those petitions.

In the Non-Hazardous Secondary Materials Rule, EPA determined that, in deciding whether a non-hazardous secondary material should be classified as a solid waste when combusted for energy recovery, it is appropriate to consider both the nature of the material itself and the manner in which the material is handled between generation and combustion. Development of the Rule was complex due to the wide array of non-hazardous secondary materials that are combusted for energy recovery and of the facilities in which they are combusted. 74 Fed. Reg. at 45-50 (JA 5-10).

Certain materials have a long history of being considered a product fuel. 75 Fed. Reg. at 31,856 (JA 34). These fuels include, for example, forestry and agricultural byproducts that have been used as fuels for hundreds, if not thousands,

of years, such as bark, limbs, wood trim from the harvesting of trees and production of lumber, bagasse (residual plant material) from the production of sugarcane, and other crop residuals. *Id.* (JA 34). These industries also produce large quantities of non-hazardous secondary materials from the production of both lumber and paper that are similar in composition and heating value to these fuels. *Id.* (JA 34). Lumber and paper production may also generate non-hazardous secondary materials used as fuels later in their life cycle in the form of construction and demolition wood and paper recycling residuals. 79 Fed. Reg. at 21,010-21.

There are a wide variety of other non-hazardous secondary materials from other industries that are also combusted for energy recovery, either with or without processing. These include on-specification and off-specification used oil, tires, coal refuse, and railroad ties. *See* 76 Fed. Reg. at 15,477-516 (JA 93-132); 79 Fed. Reg. at 21,021-28. These materials can have different fuel values, levels of contamination, management methods, and combustion units.

Because EPA could not address every possible combination of material, management, and combustion unit individually, the Rule establishes criteria and standards for determining whether a particular non-hazardous secondary material is a solid waste, and establishes procedures by which a determination can be requested from EPA (on either a case-by-case basis or a more general categorical basis) that a particular secondary material is not a solid waste. In developing the

Rule, EPA applied the standards developed in this Court's caselaw, as described above, *i.e.*, that secondary materials inserted into an ongoing industrial process are not discarded, that a secondary material need not be immediately reused to be part of an ongoing industrial process, that a material may be recycled or reclaimed is not dispositive of whether it is a solid waste prior to completion of the recycling or reclamation process, and that a secondary material or a product produced from a non-hazardous secondary material that is indistinguishable in the relevant respects from a commercial product may be treated as a commercial product.

Thus, in the Non-Hazardous Secondary Materials Rule, EPA developed criteria to distinguish between those situations where combustion of a secondary material constitutes discard, even if heat energy is recovered in the combustion process, and those in which combustion represents the legitimate use of a product fuel. 76 Fed. Reg. at 15,463-64 (JA 79-80). In making that determination, EPA focused on whether the material is managed as a valuable commodity, the heating value, and the level of contaminants, which in combination are indicative of whether a particular secondary material is a legitimate fuel product or a solid waste when burned for energy recovery. *Id.* at 15,540-42 (JA 156-58). EPA reasonably determined that materials that meet those criteria are not part of the "solid waste problem," while those that do not should be classified as solid waste.

In the rulemaking, EPA first determined what materials should be classified as “traditional fuels,” which are neither secondary materials nor solid wastes unless they are discarded. It then determined that non-hazardous secondary materials are solid waste when combusted unless EPA makes a specific determination that the material is not a solid waste, or the material falls into one of three categories, *i.e.*, (1) non-hazardous secondary materials used as product fuels that have not been previously discarded, (2) non-hazardous secondary materials used as product fuels resulting from processing of discarded non-hazardous secondary materials, and (3) non-hazardous secondary materials used as ingredients. 76 Fed. Reg. at 15,464-65 (JA 80-81). These categories are discussed further below. The Rule also provides a petition process by which parties can request that EPA determine either on a case-by-case basis or on a more general categorical basis that a particular secondary material is not a solid waste. Where EPA had sufficient data to determine that a particular non-hazardous secondary material is not a solid waste when used either for energy recovery or as an ingredient, it identified that non-hazardous secondary material in the Rule.

Traditional Fuels – The Rule provides that “traditional fuels” are not secondary materials or solid wastes unless discarded. 40 C.F.R. § 241.2. As used in the Rule, the term “traditional fuels” includes materials that have historically been used as fuels, as well as closely-related products that have been created for

use as a fuel and are produced and utilized in ways analogous to a traditional fuel.

76 Fed. Reg. at 15,477/1 (JA 93). Specifically, the definition of traditional fuels includes:

- (1) Fuels that have been historically managed as valuable fuel products rather than being managed as waste materials, including fossil fuels (e.g., coal, oil and natural gas), their derivatives (e.g., petroleum coke, bituminous coke, coal tar oil, refinery gas, synthetic fuel, heavy recycle, asphalts, blast furnace gas, recovered gaseous butane, and coke oven gas) and cellulosic biomass (virgin wood); and
- (2) alternative fuels developed from virgin materials that can now be used as fuel products, including used oil which meets the specifications outlined in 40 C.F.R. 279.11, currently mined coal refuse that previously had not been usable as coal, and clean cellulosic biomass.

40 C.F.R. § 241.2.

Materials in the first group are products that have an established ongoing history of being used as fuels, either because they are specifically produced as fuels or because they are associated with the production of fuels and have long been used as fuels. The materials in the second group (*i.e.*, clean cellulosic biomass, currently mined coal refuse that previously had not been usable as coal, and on-specification used oil) are materials that are developed from virgin materials to be fuels (biomass and used oil) or due to recent developments in technology or the energy market have been made economically viable to be used as traditional fuels (currently mined coal refuse). 76 Fed. Reg. at 15,478 (JA 94).

Because they are produced from virgin materials to be used as fuels, they are not discarded when combusted.

With regard to biomass and used oil, the definition is limited to “clean” cellulosic biomass and to “on-specification” used oil. “Clean cellulosic biomass” is defined in the Rule as “biomass that does not contain contaminants at concentrations not normally associated with virgin biomass materials.” 40 C.F.R. § 241.2. With respect to used oil, the regulations at 40 C.F.R. § 279.11 specify maximum levels for specific contaminants in used oil, referred to as “on-specification used oil,” which is not subject to further regulation when combusted. In contrast, off-specification used oil is subject to specific regulatory requirements when combusted, and is a solid waste even when combusted for energy recovery. The used oil regulations are long-standing and were not reopened in this rulemaking.

Non-Hazardous Secondary Materials That Have Not Been Previously Discarded – A wide variety of non-hazardous secondary materials are combusted in the form in which they are generated. In the rulemaking, EPA developed a methodology for distinguishing which of these materials are solid wastes and which are product fuels when burned for energy recovery. As noted above, the factors EPA considers are whether the non-hazardous secondary materials are managed as a valuable commodity, whether the material has meaningful heating

value, and whether the contaminant levels in the non-hazardous secondary material are comparable to those in traditional fuels.

After reviewing the available information, including that submitted in response to the Advanced Notice of Proposed Rulemaking and the proposal, EPA determined that it is appropriate to take different approaches for those non-hazardous secondary materials used as a fuel in combustion units that are in the control of the entity that generates the material, on the one hand, and those that are combusted in units not under the control of the generator, on the other.

With regard to non-hazardous secondary materials combusted in a unit under the control of the generator, the Rule provides that such materials are not solid wastes if the legitimacy criteria specified at 40 C.F.R. § 241.3(d)(1), which address management of the material, heating value, and contaminant levels, are met. 40 C.F.R. § 241.3(b)(1). EPA determined that combustion of secondary materials by the generator indicates that the materials are being saved and not thrown away, and that for such materials, the legitimacy criteria serve to distinguish between materials that are being burned as a product fuel and those that are being burned to dispose of them. 76 Fed. Reg. at 15,470-71, 15,532-33 (JA 86-87, 148-49). Non-hazardous secondary materials that are retained and combusted by the generator, but which do not meet the legitimacy criteria, are solid wastes even if burned for energy recovery.

EPA does not, however, believe that it is appropriate to make the same determination for non-hazardous secondary materials that are transferred between different entities for combustion. Different incentives come into play, and the record contains a number of examples of inter-firm transfers that resulted in sham recycling, environmental contamination, or both. 76 Fed. Reg. at 15,471-73, 75 Fed. Reg. at 31,874-85 (JA 87-89, 52-53).¹ As a result, for materials transferred between different entities for use as fuel, EPA decided that it needs to be more “careful in examining whether secondary materials may be transferred as commodity fuels or as wastes.” 76 Fed. Reg. at 15,471/3 (JA 87).

The Rule provides that while as-generated non-hazardous secondary materials that are combusted by an entity other than the generator are considered to be solid wastes, EPA may determine on either a case-by-case basis or a more general categorical basis that the material should instead be classified as a product fuel. The Rule makes three such categorical determinations: (1) scrap tires that are not discarded and are managed under the oversight of established tire collection programs; (2) resinated wood; and (3) coal refuse that has been recovered from

¹ The regulations take a different approach for ingredients transferred between entities because ingredients are more like integral parts of the industrial process than combusted materials. 40 C.F.R. § 241.3(b)(3); 76 Fed. Reg. 15,459-60, 15,516 (JA 75-76, 132). No petitioner is challenging the provisions of the Rule related to ingredients

legacy piles and processed in the same manner as currently-generated coal refuse. 40 C.F.R. § 241.4(a)(1)-(3).² The Rule also provides a petition process by which such determinations can be requested. EPA has received petitions for both case-by-case and categorical determinations and is considering them.

Product Fuels Created From Processing of Discarded Non-Hazardous Secondary Materials – In the Rule, EPA determined that fuels produced from the processing of discarded non-hazardous secondary materials are new, reclaimed products, rather than solid waste, in the same way that aluminum, glass, and paper produced from the recycling of waste paper, waste glass, and waste aluminum are not solid waste. 40 C.F.R. § 241.3(b)(4); 76 Fed. Reg. at 15,537 (JA 153). The Agency found that “Because the resulting fuel/ingredient products are, in effect, reclaimed or extracted products from a recycling process, EPA considers such materials to be ‘new’ products that have not been discarded and therefore are not solid wastes.” 76 Fed. Reg. at 15,537/1 (JA 153).

In order to qualify for this provision, the discarded material must be “processed” as defined in the Rule and the product fuel must meet the legitimacy criteria concerning management of the material, heating value, and contaminant

² EPA has also made a categorical determination that dewatered pulp and paper sludges are not solid waste when combusted by the generator under specified conditions. 40 C.F.R. § 241.4(a)(4).

levels. “Processing” is defined as “operations that transform discarded non-hazardous secondary material into a non-waste fuel or non-waste ingredient product.” 40 C.F.R. § 241.2. It specifically includes operations that remove or destroy contaminants, significantly improve the fuel characteristics of the fuel, or chemically improve the as-fired energy content. *Id.* It does not include minimal operations, such as shredding, that result only in modifying the size of the material. *Id.*

Non-Hazardous Secondary Materials Used as Ingredients – A number of non-hazardous secondary materials, such as blast furnace slag, cement kiln dust, coal combustion residues, and foundry sand, are used as ingredients in combustion processes to produce products such as cement. 76 Fed. Reg. at 15,536 (JA 152). Such materials are regulated under the Rule in the same way as non-hazardous secondary materials and products produced from such materials that are combusted for energy recovery, except that the Rule does not distinguish between such materials when combusted in a unit within the control of the generator and those combusted in a unit controlled by another entity. In both cases, non-hazardous secondary materials that meet the legitimacy requirements for ingredients (40 C.F.R. § 241.3(d)(2)) are not solid waste when used as an ingredient. *Id.* § 241.3(b)(3). Because these materials contribute specific chemical ingredients to the finished product and because control of the nature of the ingredients is

necessary to the quality of the finished process, the Agency determined that such materials are valuable products whether used by the generator or other entities, and thus are not solid waste as long as the legitimacy criteria are met. 76 Fed. Reg. at 15,536 (JA 152). Likewise, ingredient products produced from non-hazardous secondary materials are not solid wastes provided they meet the legitimacy criteria. 40 C.F.R. § 241.3(b)(4). No petitioner is challenging the provisions of the Rule concerned with ingredients.

II. LITIGATION HISTORY

Numerous petitions for review of the March 2011 final rule were filed and consolidated in a case originally captioned as *Waste Management, Inc. v. EPA*, No. 11-1148. (After *Waste Management, Inc.* voluntarily dismissed its petition, the case was re-captioned as *Solvay USA, Inc. v. EPA*, No. 11-1189.) EPA subsequently moved to hold the case in abeyance while it conducted a rulemaking to determine whether the Rule should be clarified or modified. The Court granted that motion by Order dated November 1, 2011. ECF No. 1339179. As a result of that administrative process, EPA promulgated the February 2013 rule. Petitions for review of that rule were filed and consolidated as *National Association of Clean Water Agencies v. EPA*, No. 13-1152. Those consolidated cases were then consolidated into this action. As noted above at pg. 6, because of the relationship between the rule under review in this case and the simultaneously-promulgated

rules establishing Clean Air Act emission standards for commercial and industrial boilers and incinerators, the Court has ordered that these be heard by the same panel. ECF No. 1461584.

SUMMARY OF ARGUMENT

Environmental Petitioners' Issues

There is no basis to Environmental Petitioners' claim that all non-hazardous secondary materials are solid waste when combusted. The definition of "solid waste" in RCRA specifies that to be a solid waste a material must be "discarded," and, in order to be discarded, it must be "disposed of, thrown away, or abandoned." This Court's case law has recognized that the determination of whether a particular secondary material has been discarded is complex, fact-specific, and generally subject to EPA's discretion. There is nothing in either the statute or this Court's decisions that requires that EPA be deprived of that discretion simply because a secondary material is being combusted either for energy recovery or when being used as an ingredient.

In the rulemaking, EPA examined a broad range of secondary materials and developed specific criteria for determining whether a particular secondary material has not been discarded, and thus should be characterized as a product fuel rather than a solid waste. Specifically, a material is characterized as a product fuel if it is managed as a valuable commodity by being stored within reasonable time frames

and managed analogous to traditional fuels or otherwise managed to prevent releases to the environment; has meaningful fuel value based on established benchmarks for fuels burned for energy recovery; and has levels of contaminants that are comparable to those in the traditional fuels that the combustion unit is designed to burn. These criteria are a reasonable exercise of the Agency's discretion to determine what constitutes the "discard" of a secondary material. The Rule addresses the complementary statutory goals of recovering material and energy resources from secondary materials and protecting human health and the environment. *See AMC I*, 824 F.2d at 1179. The use of secondary materials as fuels and/or ingredients not only recovers valuable resources but contributes to emission reductions. For example, both greenhouse gas and particulate matter emissions have been reduced as a co-benefit of the use of secondary materials. 76 Fed. Reg. at 15,466-67 (JA 82-83).

There is also no basis to Petitioners' claim that all fuels produced from the processing of non-hazardous secondary materials must be characterized as solid wastes. Petitioners concede that items such as aluminum cans and newspapers that are produced from non-hazardous secondary material are not solid waste, but provide no reason why fuels should be treated differently. The statute encourages the reuse of secondary materials to recover both material and energy values and nothing in the statute distinguishes between these two uses for non-hazardous

secondary materials. Furthermore, this Court has never held that a product produced from a non-hazardous secondary material must be characterized as a solid waste, and the case law demonstrates that commercial products may be produced from processing of solid wastes, including hazardous wastes, which are not at issue here. For example, *Safe Food* held that zinc fertilizers produced from hazardous waste are reasonably characterized as products rather than as wastes. 350 F.3d at 1269. Certainly, this same general approach should apply in cases (such as those presented here) involving *non*-hazardous solid wastes, and the record demonstrates that EPA applied this approach in a reasonable and well-explained fashion. EPA developed specific criteria regarding management, fuel value, and contaminant levels, for when a processed material is a product fuel, and these criteria are entirely consistent with EPA's statutory authority, as explained in cases such as *Safe Food*.

EPA reasonably classified on-specification used oil and clean cellulosic biomass as traditional fuels. These are products that are produced for the purpose of being used as fuel, and are indistinguishable in the relevant characteristics from analogous commercial products. On-specification oil, in particular, has been treated as a refined petroleum product under long-standing EPA regulations. Thus, EPA reasonably classified them as product fuels.

EPA reasonably determined that tires managed under the oversight of established tire collection programs are not solid waste when combusted. The fuel value of tires is higher than that of coal, the fossil fuel that they typically replace, and they have comparable or lower levels of contaminants. Furthermore, there is a highly-developed regulatory and commercial system in place for managing tires, including off-specification tires, and tires removed from vehicles from the time they are removed from a vehicle, to the time they are combusted. Because the tires are managed under an established collection infrastructure, and because they have meaningful fuel value and contaminant levels comparable to traditional fuels, EPA reasonably determined that they are not discarded, and thus not solid waste, when combusted.

Industry Petitioners' Issues

Contrary to Industry Petitioners' assertions, EPA reasonably distinguished between non-hazardous secondary materials that are retained by a generator for use as product fuel and those that are transferred by the generator to another entity and then combusted for energy recovery. Where the generator retains a non-hazardous secondary material that meets the legitimacy criteria for heat content, contaminant levels, and management of the material as a valuable commodity, it is reasonable to conclude that the material has been saved and combusted as a product fuel, rather than discarded.

When materials are transferred from the generator to another entity and then combusted for energy recovery, however, the party to whom the material is transferred may not have the same incentive to manage it as a product fuel. This is demonstrated by a number of analyses in the record that show the risk of sham recycling and environmental harm to be higher for transferred materials. Given the broad range, both in type and number, of non-hazardous secondary materials that potentially may be transferred and combusted and the Agency's responsibility to protect human health and the environment, it was reasonable for the Agency to determine that materials transferred to another entity should presumptively be characterized as solid wastes unless the Agency makes an affirmative determination that the material should be characterized as a product fuel.

There is no basis to Petitioners' claim that sewage sludge is excluded from the statutory definition of solid waste because it is "solid or dissolved material in domestic sewage." In *National Ass'n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1125-27 (D.C. Cir. 2013) ("NACWA"), this Court held that EPA has authority to regulate sewage sludge incinerators under Clean Air Act section 7429. Thus, the Court has already held, at least implicitly, that sewage sludge combusted in such units is solid waste. In any event, Petitioners' claim is not supported by the statute. The exclusion on which Petitioners rely applies to material in sewage,

which is the water that is sent to a sewage plant for treatment. It does not apply to the sludge generated during that treatment process.

STANDARD OF REVIEW

The standard of review is set forth in the Administrative Procedure Act, which provides that the Court may hold unlawful and set aside agency action if it is found to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law” or in excess of EPA's “statutory jurisdiction, authority, or limitations.” 5 U.S.C. § 706(2)(A), (C).

With regard to questions of statutory interpretation, the Court must first consider whether Congress has directly addressed the particular question at issue. *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984). If the statute is silent or ambiguous on a particular issue, the Court must accept the agency’s interpretation if it is reasonable; the agency's interpretation need not represent the only permissible reading of the statute nor the reading that the Court might originally have given the statute. *Id.* at 843 & n.11.

The “arbitrary or capricious” standard presumes the validity of agency actions, and a reviewing court is to uphold an agency action if it satisfies minimum standards of rationality. *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 520-21 (D.C. Cir. 1983); *Ethyl Corp. v. EPA*, 541 F.2d 1, 34 (D.C. Cir. 1976) (en banc). Where EPA has considered the relevant factors and articulated a

rational connection between the facts found and the choices made, its regulatory choices must be upheld. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Where the agency's decision rests on an evaluation of complex scientific data within the agency's technical expertise, courts are extremely deferential. *Ethyl Corp.*, 541 F.2d at 36 (“[The court] must look at the [agency’s] decision not as the chemist, biologist, or statistician that [it is] qualified neither by training nor experience to be, but as a reviewing court exercising our narrowly defined duty of holding agencies to certain minimal standards of rationality.”); *Am. Trucking Ass’ns, Inc. v. EPA*, 283 F.3d 355, 374 (D.C. Cir. 2002).

ARGUMENT

I. RCRA DOES NOT REQUIRE THAT ALL NON-HAZARDOUS SECONDARY MATERIALS BE CLASSIFIED AS SOLID WASTE WHEN COMBUSTED

Although Environmental Petitioners’ brief focuses on narrow issues concerning specific materials that are addressed below, their claims are based on two fundamentally erroneous premises: (1) that all non-hazardous secondary materials that are combusted are solid waste, and (2) that solid wastes cannot be processed into product fuels. These premises are inconsistent with both the statute and this Court’s precedents. The first erroneous premise is addressed in this section. The issue of processing is addressed in section II below.

A. Nothing in RCRA Requires EPA to Classify all Non-Hazardous Secondary Materials as Solid Waste When Combusted for Energy Recovery.

The definition of “solid waste” in RCRA specifies that to be a solid waste a material must be “discarded.” 42 U.S.C. § 6903(27). In *AMC I* the Court held that a material is “discarded” if it is “disposed of, thrown away, or abandoned.” 824 F.2d at 1184-86. If materials do not become part of the waste disposal problem, *i.e.*, if they are not disposed of, thrown away, or abandoned, they are not solid wastes, and thus are not subject to regulation under RCRA. *Id.* The Court noted that in determining what constitutes discard, EPA should consider the statutory goal of encouraging the use of alternative methods of disposal, including recycling. *Id.* at 1185-86. In particular, the Court held that secondary materials “reused in an ongoing manufacturing or industrial process,” are not discarded and thus are not solid waste subject to regulation. *Id.* at 1186. Although the Court did not address any specific materials or processes, it held that EPA’s regulations were overly broad to the extent that they regulated materials reused in a “continuous or ongoing” industrial process. *Id.* at 1180.

The Court addressed the definition of solid waste again in *ABR*, where it rejected the view that the holding in *AMC I* was limited to continuous and ongoing industrial processes in which secondary materials were used immediately upon

production without any intervening storage. 208 F.3d at 1053. Again the Court did not address any specific industrial materials or processes, but rather held:

At this stage, all we can say with certainty is that at least some of the secondary material EPA seeks to regulate as solid waste is destined for reuse as part of a continuous industrial process and thus is not abandoned or thrown away. Once again, "by regulating in-process secondary materials, EPA has acted in contravention of Congress' intent," because it has based its regulation on an improper interpretation of "discarded" and an incorrect reading of our *AMC I* decision.

Id. at 1056 (citation omitted).

Thus, the Court has clearly recognized that not all secondary materials are solid waste and, specifically, that where a secondary material has value as a product or an ingredient, and is appropriately managed, *i.e.*, has not become part of the "waste disposal problem," *AMC I*, 824 F.2d at 1184-86, it has not been discarded and is not solid waste.³

Furthermore, the Court has recognized that this question is a complex one and arises in situations ranging broadly from in-process secondary materials, which the Court has held are not solid waste as a matter of law, to materials that are

³ In addition, the Ninth Circuit has held that non-hazardous secondary materials may, under certain circumstances, be burned and not constitute a solid waste under RCRA. *See Safe Air For Everyone v. Meyer*, 373 F.3d 1035 (9th Cir. 2004) (Kentucky bluegrass stubble may be burned to return nutrients to the soil and not be a solid waste). While the Kentucky bluegrass stubble was not burned as a fuel, this opinion is instructive in that it shows that burning of non-hazardous secondary materials does not automatically constitute waste management.

indisputably discarded. *API II*, 216 F.3d at 56. In between are a broad range of situations where EPA must exercise its discretion to determine whether a particular material is part of the “waste disposal problem.” *Id.* at 57 (“Where an industrial by-product may be characterized as discarded or ‘in process’ material, EPA’s choice of characterization is entitled to deference”); *AMC II*, 907 F.2d at 1186 (“*AMC II*”) (the term “discarded” is “marked by the kind of ambiguity demanding resolution by the agency’s delegated lawmaking powers.”); *ABR*, 208 F.3d at 1056 (the term “discard” is ambiguous as applied to some situations but not others).

This is exactly the situation addressed by EPA in promulgating the Non-Hazardous Secondary Materials Rule. EPA had to determine whether a broad range of materials are solid waste when combusted for energy recovery. Combustion of some of these materials is integral to an ongoing industrial process, while other materials are used as fuels in unrelated processes. As the Court has recognized, whether these materials are solid waste is a fact-specific determination that falls within EPA’s “delegated lawmaking powers.” As demonstrated below, EPA has reasonably exercised that discretion here by developing criteria, based on management, heating value, and contaminant levels, that distinguish between non-hazardous secondary materials that are being legitimately used as product fuels and those that are solid waste when combusted for energy recovery.

Furthermore, in *Safe Food*, the Court specifically held that it is permissible under RCRA for EPA to determine that a secondary material used for other than its original purpose (outside of an ongoing industrial process) is not discarded, and thus is not a solid waste, and to establish standards for determining when a particular secondary material should be classified as a product or a waste. 350 F.3d at 1269. The rule upheld in *Safe Food* is directly relevant to the rule at issue in this case. In *Safe Food*, EPA had determined that secondary materials meeting certain specifications and used as zinc fertilizers were not discarded, and thus were not solid and hazardous waste, because the Agency had determined that “market participants treat the . . . materials more like valuable products than like negatively-valued wastes, managing them in ways inconsistent with discard, and the fertilizers derived from these recycled feedstocks are chemically indistinguishable from analogous commercial products made from virgin materials.” 350 F.3d at 1269.

There is nothing in either the statute or this Court’s precedents that limits these principles to secondary materials that are not used as fuels.⁴ There is no

⁴ The decisions in *Natural Resources Defense Council v. EPA*, 755 F.3d 1010 (D.C. Cir. 2014), and *Sierra Club v. EPA*, 755 F.3d 968 (D.C. Cir. 2014), are not to the contrary. The holdings in both of those cases are based on a specific statutory provision, 42 U.S.C. § 6924(q), which by its terms is applicable only to “hazardous waste” burned as fuel and fuels derived from “hazardous waste.” The *(Footnote continued)*

question that a wide range of materials are sold commercially as fuels, including coal, fuel oil, gasoline, natural gas, and wood, and there is little question that those materials are products. There is nothing in RCRA that requires that secondary materials with heating values and contaminant levels similar to these common, commercial fuels be treated as solid wastes instead of products. That determination follows directly from the Court's holding in *Safe Food*. 350 F.3d at 1269 ("it seems eminently reasonable to treat materials that are indistinguishable [from virgin materials] in the relevant respects as products as well.").

Furthermore, in RCRA Congress specifically recognized the value of deriving energy from materials that would otherwise be disposed of as solid waste. 42 U.S.C. § 6901(d). Thus, EPA's determination that non-hazardous secondary materials that meet the legitimacy criteria are not solid waste when combusted for energy recovery is entirely consistent with the statute.⁵

Rule under review in this case applies only to *non*-hazardous secondary materials, and thus section 6924(q) is inapplicable.

⁵ Environmental Petitioners' claim that the Rule is inconsistent with RCRA because it only addresses materials that are combusted, *Env't'l Pet'rs Br.* at 43-45, is baseless. The Court's precedents make clear that the determination of whether a particular material is a solid waste depends both on the nature of the material and the way in which it is managed. *See pp.* 30-33, *supra*. This Rule addresses whether non-hazardous secondary materials are solid waste only in the particular situation when they are recycled for use in combustors. Whether the same materials would be solid waste when managed in a different way would have to
(Footnote continued)

B. The Legitimacy Criteria Are Reasonable.

In the Non-Hazardous Secondary Materials Rule, EPA developed criteria and standards for determining when a specific non-hazardous secondary material should be considered a product fuel rather than a solid waste when combusted for energy recovery. Those criteria address the fuel value of the material, the level of contaminants, and how the materials are managed. *See* pages 13-21, *supra*. In the Rule EPA did *not* determine that all non-hazardous secondary materials burned for energy recovery are products, as claimed by the Environmental Petitioners. Env't Pet'rs Br. at 23, 41. To the contrary, the Rule provides that non-hazardous secondary materials *are* solid waste when combusted, unless they either meet the criteria established in the Rule or EPA has specifically determined that they are product fuels.⁶ Thus, a material combusted for energy recovery that does not meet the standards for heating value, contaminant levels, and management practices, or that EPA has not determined is a product fuel, is a solid waste.

be determined on the basis of the facts of each case. EPA had no reason to address that issue in this rulemaking.

⁶ Specifically, as discussed above, non-hazardous secondary materials combusted in a unit under the control of the generator and products produced from non-hazardous secondary materials by processing are not solid waste when combusted if they meet the legitimacy criteria. Non-hazardous secondary materials transferred to another entity are solid waste when combusted for energy recovery unless EPA determines that they are not.

None of the Environmental Petitioners' specific challenges to the legitimacy criteria, Env. Pet'rs Br. at 49-51, has merit. Petitioners first assert that the list of contaminants, which is limited to pollutants regulated under Clean Air Act sections 7412 and 7429, should be broader. However, the purpose of the Rule is to determine whether non-hazardous secondary materials are solid waste when combusted for energy recovery, and thus whether they are subject to regulation under Clean Air Act section 7412 or 7429. Given that the focus of the Rule is on regulation of air emissions under the Clean Air Act, EPA reasonably focused on those contaminants that Congress and/or EPA have determined require regulation under those provisions. 76 Fed. Reg. at 15,524-25, 15,542 (JA 140-41, 158).

Environmental Petitioners' claim that the criteria for management as a valuable product imposes no requirements, Env. Pet'rs Br. at 49-50, is based on a fundamental misreading of EPA's preamble. The preamble does not equate management of a material as a product with management of a solid waste. To the contrary, it carefully distinguishes between the two. It states that commodities are handled "specifically to prevent the loss of material because of its value." It then distinguishes that from management of solid waste, even if it is done "more in a way that protects the surrounding environment from the material." 76 Fed. Reg. at 15,522, 15,526 (JA 138, 142). Thus, for example, a material being managed as a solid waste may be exposed to the elements, which would allow the material to be

degraded, even if the management system included a containment system to prevent the release of contaminants. In contrast, a non-hazardous secondary material that is commodity-like would be managed in a way that would prevent the loss of value of the material, for example, by covering it so it is not exposed to the elements or holding it in a closed container. Furthermore, containment alone does not make material a non-waste. Management as a commodity is only one of the legitimacy criteria, and those criteria must all be evaluated to make the waste determination, and all of them must be met to determine that a material is not a solid waste. 40 C.F.R. § 241.3(b)(3), (4).

Finally, there is no basis to Petitioners' claim regarding the self-implementing nature of the criteria. *See* Env. Pet'rs Br. at 50-51. Generators and others that combust materials that do not meet the legitimacy criteria in units other than a solid waste incinerator are in violation of regulations promulgated under the Clean Air Act and subject to enforcement action. The RCRA hazardous waste program has operated for decades with the requirement that a generator make the determination of whether a solid waste is a hazardous waste subject to the RCRA Subtitle C requirements. 40 C.F.R. § 262.11. Like the Subtitle C regulation, under this Rule, persons must evaluate their non-hazardous secondary material against the standards in the Rule in order to determine whether their material is a product fuel or solid waste unless EPA has made a specific

determination that the particular non-hazardous secondary material is, or is not, a solid waste. 40 C.F.R. § 241.3(b)(1), (d)(1); see 76 Fed. Reg. at 15,533/3 (describing applicable notification requirements pursuant to Clean Air Act sections 7412 and 7429). Petitioners identify no reason why this regulation for non-hazardous secondary materials should impose more stringent requirements than the Subtitle C requirements for hazardous waste.

II. EPA REASONABLY DETERMINED THAT MATERIALS PROCESSED FROM SOLID WASTE THAT MEET THE LEGITIMACY CRITERIA ARE NOT SOLID WASTE

The Non-Hazardous Secondary Materials Rule provides that fuels meeting the legitimacy criteria produced from the processing of discarded non-hazardous secondary materials are not solid waste. *See* p. 20-21, *supra*. Environmental Petitioners challenge that provision, asserting that RCRA imposes a *per se* ban on producing product fuels from materials that have once been discarded. *Env't. Pet'rs Br.* at 32-36. Petitioners' argument is based on highly contorted and inappropriate readings of the statute and this Court's precedents.

"Processing" is defined in the Rule as "operations that transform discarded non-hazardous secondary material into a non-waste fuel or non-waste ingredient product." 40 C.F.R. § 241.2. Processing as used in the Rule involves "extracting" new products from secondary materials by transforming them into products. 76 Fed. Reg. at 15,537 (JA 153). Thus, processing includes, for example, operations

that remove or destroy contaminants, significantly improve the fuel characteristics of the material (such as sizing or drying the material in combination with other operations), or chemically improve the energy content. *Id.* Operations that modify the size of the material by shredding do not meet the definition of “processing.” *Id.* Prior to and during processing the non-hazardous waste is still considered a waste subject to any applicable federal or state requirements.

While the Agency could not describe in the Rule all recycling operations that do or do not constitute “processing” under the Rule, examples are discussed in the rulemaking record. For example, the Agency found that coal fines, biomass, and other materials can be mixed and processed into pellets that have the handling characteristics of coal. 76 Fed. Reg. at 15,538 (JA 154). Operations like the K-Fuel process, which employs heat and pressure to transform coal into a cleaner, more efficient fuel by removing water and contaminants, thus increasing combustion efficiency, can be used and constitute processing. *Id.* Animal manure can be processed in an anaerobic digester to create a gaseous fuel. *Id.* Another example of a material that is processed to create a product fuel is construction and demolition wood that is sorted to remove contaminants, such as lead-painted wood, treated wood, and non-wood materials, and size-reduced. 76 Fed. Reg. at 15,485. These operations create a new product that is indistinguishable in the relevant aspects from virgin wood.

EPA also identified operations that would not constitute “processing” under the Rule. For example, dewatering of pulp and paper sludges would not constitute processing. 76 Fed. Reg. at 15,488. Even though dewatering improves the fuel characteristics of the material, such action is not sufficient to make the material sufficiently processed into a non-waste fuel, since dewatering is generally part of normal waste management activities. *Id.*

As EPA explained in the rulemaking, the production of non-waste products by recycling solid waste has been practiced for many years, and if the Court were to hold that anything produced from a solid waste remains a solid waste, it would convert numerous items that are undisputedly products, such as aluminum cans and newspapers, into solid waste. 76 Fed. Reg. at 15,475 (JA 91). Petitioners acknowledge this fact. *Env't. Pet'rs Br.* at 33. However, they nonetheless assert that RCRA prohibits the same result for fuels. They identify, however, no specific statutory provision that prohibits the production of product fuels from solid waste. In fact, the one statutory provision that addresses the use of wastes as fuels is 42 U.S.C. § 6924(q), which is specifically limited to *hazardous waste*, and requires EPA to establish standards for fuels produced from such wastes. *See Natural Res. Def. Council v. EPA*, 755 F.3d 1010, 1019-21 (D.C Cir. 2014). The fact that Congress specifically limited the provision to hazardous wastes demonstrates that it did not intend to similarly restrict the use of non-hazardous wastes as fuels.

Because there is no provision in RCRA prohibiting the production of product fuels from non-hazardous solid wastes, Petitioners attempt to rely on provisions that separately mention fuels and other products. These provisions do not support their claim, however. For example, Petitioners rely on the Congressional Findings in RCRA section 6901, 42 U.S.C. § 6901(c), (d). *Env't Pets. Br.* at 35. However, the fact that Congress included separate findings for “Materials” and “Energy” does not demonstrate that it intended them to be treated differently considering that they are different types of products, are produced from different sorts of wastes, and used in different sorts of facilities. Furthermore, the findings on energy in section 6901(d) are directly contrary to Petitioners’ argument. Those findings specifically state that “solid waste represents a potential source of solid fuel, oil, or gas that can be converted into energy.” 42 U.S.C. § 6901(d)(1). The most logical reading of that provision is that Congress intended EPA to develop methods for the production of fuels from solid waste, not that it would require all solid wastes to be combusted in incinerators. The same is true for the similar statement of findings in 42 U.S.C. § 6941a.

Petitioners’ reliance on the definitions of “recovered resources” and “resource recovery,” 42 U.S.C. § 6903(20), (22), is similarly misplaced. *See Env’t Pet’rs Br.* at 35. The fact that Congress defined “recovered resources” to include both materials and energy is more logically read to mean that Congress intended to

cover both things rather than that it somehow intended to treat the two differently. If Congress had intended to prohibit the recovery of energy resources from solid waste, it would have limited the definition of resource recovery to “materials.” Rather, the fact that Congress included “energy” in the definition indicates that Congress expected that energy, in the form of fuel products, *would* be recovered from solid wastes.

Petitioners claim that Clean Air Act section 129(g)(1)(B), 42 U.S.C. § 7429(g)(1)(B), which excludes certain small power production facilities and cogeneration facilities that burn “homogenous waste” from the definition of “solid waste incineration unit,” demonstrates that Congress intended to prohibit any production of a fuel from non-hazardous waste. Env’t Pet’rs. Br. at 38. This claim is without merit. It is unreasonable to think that Congress would have made such a sweeping change to the jurisdictional provisions of RCRA through parenthetical language in the Clean Air Act. *See Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 468 (2001) (Congress does not “hide elephants in mouseholes”). It is much more reasonable that Congress was simply addressing the issue at hand, *i.e.*, distinguishing between units combusting “homogeneous waste,” such as tires or used oil, and “refuse-derived fuel,” which as used in the statute, is fuel derived from municipal solid waste, S. Rep. No. 101-228 at 145-46 (1989), for the purpose of the exclusion from the definition of solid waste incineration unit. There is no

indication that Congress was considering the larger issue of the production of fuels from non-hazardous waste.

This Court's precedents are equally unsupportive of Petitioners' claim. Petitioners rely entirely on a sentence in *AMC I*, quoted in *ABR*, that discusses EPA's authority to regulate used oil recyclers, who collect used oil, distill it, and sell the resulting material for use in boilers. *Env't. Pet'rs Br.* at 33. The fact that EPA has authority to regulate the recycling process does not mean that the result of that process is a solid waste. Furthermore, the issue of used oil recycling was not at issue in *AMC I* or *ABR* (or in *API*, which also cites the same discussion in *AMC I*). In *AMC I*, the Court referred to used oil recycling in a footnote in rebutting an argument made by EPA that RCRA section 6935 (which concerns used oil) indicated that the Agency had authority to regulate recycled materials, in particular secondary materials generated at oil refineries. 824 F.2d at 1187 n.14. The Court pointed out that section 6935 was not contrary to its holding that secondary materials used as part of an ongoing industrial process are not discarded because it addresses used oil that is discarded. *Id.* The Court said nothing about the status of the oil, *i.e.*, whether it was a product or a solid waste, after it was recycled.

In *ABR*, the Court cited the *AMC I* discussion of used oil in its discussion of the opinion in *API I*, where the Court quoted the *AMC I* discussion (in a footnote) to rebut an argument made by intervenors in that case that EPA is precluded from

regulating a recycling process that produces a valuable product. 208 F.3d at 1054-55, citing 906 F.2d at 741 n.16. (In fact, the *API I* decision contradicts Petitioners' argument because it specifically identifies the material produced by used oil recycling as a valuable product. 906 F.2d at 741 n.16.) The actual issue before the Court in *ABR* was whether the decision in *AMC I* regarding secondary materials used in an ongoing industrial process was limited to materials that were immediately re-inserted into the process or could include materials that were stored for some time first. 208 F.3d at 1053.

Environmental Petitioners also inappropriately rely on language from *ABR* for the contention that a material derived from a solid waste remains a solid waste. Env't Pet'rs Br. at 28, 31 n.9, citing *ABR*, 208 F.3d at 1056. In the cited passage, however, the Court did not state a holding, but rather simply characterized the decisions in *AMC II* and *API I*. The relevant sentence states in its entirety, "The point of *AMC II*, and for that matter *API*, is that once material qualifies as 'solid waste,' something derived from it retains that designation even if it might be reclaimed and reused at some future time." *ABR*, 208 F.3d at 1056 (footnote omitted). The Court's reference to reclamation or reuse "at some future time" demonstrates that it was referring to materials that have not yet been recycled. Furthermore, the Court went on in the next sentence to state that this concept was

inapplicable to the issue before it. *Id.* Thus, *ABR* provides no support for Petitioners' claim.

AMC II and *API I* also provide no support for Petitioners' claim because in both cases the Court was addressing how the management of a secondary material should be regulated, and not the status of any material produced by that management. In *AMC II*, the Court was addressing the status of surface impoundments into which sludges produced from the treatment of wastewater were stored. 907 F.2d at 1185-87. In *API I*, the Court addressed the question of whether K061 was subject to hazardous waste regulation during the recycling process. 906 F.2d at 740-42.

The decisions in *Owen Elec. Steel Co. v. Browner*, 37 F.3d 146 (4th Cir. 1994), and *United States v. ILCO, Inc.*, 996 F.2d 1126 (11th Cir. 1993), are similarly unsupportive of Petitioners' claim. The issue in both of those cases was whether EPA had authority to regulate the recycling *process*, not whether the *product* produced from that process was a solid waste. In fact, the court in *ILCO* specifically rejected the contention that regulation of the recycling process necessitates regulation of the recycled product. 996 F.2d at 1132 ("It is unnecessary to read into the word 'discarded' a congressional intent that the waste in question must finally and forever be discarded").

In short, none of these cases addressed the status of materials produced from the processing of solid waste, whether used oil or otherwise. That, however, is the sole issue addressed by the processing provision of the Rule. Materials subject to that provision are solid waste until they are processed into products. The definition of “processing” in the Rule specifically refers to operations that “transform” wastes into products, and includes removing contaminants, improving fuel value and chemically improving energy content. 40 C.F.R. § 241.2. After which, if the processed materials meet the legitimacy criteria, they are product fuels and not solid waste. 40 C.F.R. § 241.3(b)(4); *see* 76 Fed. Reg. at 15,537/1 (JA 153) (“Because the resulting fuel/ingredient products are, in effect, reclaimed or extracted products from a recycling process, EPA considers such materials to be ‘new’ products that have not been discarded and therefore are not solid wastes.”)

This Court has recognized that “it seems eminently reasonable to treat materials that are indistinguishable [from virgin materials] in the relevant respects as products as well.” *Safe Food*, 350 F.3d at 1269. Petitioners acknowledge that this principle applies to non-fuel products. Their claim that RCRA requires a different regime for fuels is not supported by either the statute or caselaw and should be rejected.

III. EPA REASONABLY CLASSIFIED ON-SPECIFICATION USED OIL AND CLEAN CELLULOSIC BIOMASS AS TRADITIONAL FUELS

As discussed at pp. 15-17, *supra*, in the Non-Hazardous Secondary Materials Rule, EPA determined that a category of materials defined as “traditional fuels” are products, rather than non-hazardous secondary materials or solid wastes. This category includes materials that have traditionally been used as fuels, such as coal, oil, natural gas, and wood, as well as closely-related products that have been created for use as a fuel and are produced and utilized in ways analogous to a traditional fuel. This latter category includes on-specification used oil, clean cellulosic biomass, and currently mined coal refuse.

Although Petitioners seek to have this provision vacated in its entirety, their only specific challenge to it is the claim that EPA improperly determined that on-specification used oil and clean cellulosic biomass should be classified as traditional fuels. *Env’tl Pets. Br.* at 46-48. Thus, as an initial matter, their relatively narrow claim presents no basis for their sweeping requested relief. Furthermore, this claim is based on a fundamental misunderstanding of EPA’s basis for classifying on-specification used oil and clean cellulosic biomass as alternative “traditional” fuels. On-specification used oil and clean cellulosic biomass are products that are produced for the purpose of being used as fuel. Clean cellulosic biomass is the same material as the virgin wood it replaces, and

on-specification fuel is produced from petroleum products. Thus, the concept of discard is irrelevant as to these materials. (As demonstrated in section II, *supra*, nothing in RCRA prohibits the processing of a solid waste into a product fuel.)

On-specification used oil is used oil that has been determined to meet the contaminant specifications in 40 C.F.R. § 279.11, either before or after processing. The specifications were developed as part of the regulations implementing RCRA section 6935, 42 U.S.C. § 6935, which required EPA to develop standards for the recycling of used oil. While those regulations do not specifically address whether on-specification used oil is a solid waste when combusted (or at all), they do provide that used oil meeting the specifications is not subject to further regulation under those provisions. On-specification used oil is thus indistinguishable in the relevant respects from commercial oil-based fuels. The Rule recognizes that fact and codifies that on-specification used oil is a product fuel, rather than a secondary material.

Environmental Petitioners do not address EPA's actual rationale for classifying on-specification used oil as an alternative traditional fuel, but rather argue that the used oil, prior to processing, is discarded, which is irrelevant, and

that product fuels cannot be produced from solid waste, which, as discussed above, is wrong as a matter of law. Thus, there is no basis for their challenge.⁷

Their similar challenge to the classification of clean cellulosic biomass as a traditional fuel fails for the same reason. Clean cellulosic biomass includes a variety of plant-derived materials that are produced during agriculture, forestry and lumber production, forest fire and disaster clearance, and clean construction and demolition wood. 40 C.F.R. § 241.2. In order to qualify as “clean,” cellulosic biomass cannot contain contaminants at concentrations not normally associated with virgin biomass materials. *Id.* Thus, clean cellulosic biomass is indistinguishable in relevant aspects from wood and other plant materials that are burned as a product fuel. As with on-specification used oil, EPA determined that these byproduct plant materials are both sufficiently similar to virgin materials and have a sufficient history of use as product fuels that they should be classified as traditional fuels. 76 Fed. Reg. at 15,477-78 (JA 93-94).

The only material included in the definition of cellulosic biomass that Petitioners challenge is construction and demolition debris, which they argue has been discarded. *See Env’t Pet’rs Br.* at 30. Again, however, that is not EPA’s

⁷ Furthermore, as discussed below with regard to tires, Petitioners’ claim that used oil is discarded is fundamentally flawed. Someone getting their oil changed is concerned with purchasing new oil, not discarding the used oil.

rationale for identifying it as a traditional fuel. Rather, EPA determined that clean construction and demolition wood (material with contaminant concentrations analogous to that in virgin wood), is clean cellululosic biomass, which is an alternative fuel developed from virgin materials that can now be used as fuel product. Accordingly, there is no basis for Petitioners' claim.

IV. EPA REASONABLY DETERMINED THAT TIRES MANAGED UNDER THE OVERSIGHT OF ESTABLISHED TIRE COLLECTION PROGRAMS ARE NOT SOLID WASTE

In the Non-Hazardous Secondary Materials Rule, EPA determined that tires managed under the oversight of established tire collection programs are not solid waste when combusted. 40 C.F.R. § 241.4(a)(1). EPA explained that the fuel value of tires is higher than that of coal, the fossil fuel that they replace, and that the level of contaminants is comparable. 76 Fed. Reg. at 15,491-95 (JA 107-11). Furthermore, there is a highly-developed regulatory and commercial system in place for managing off-specification tires and tires removed from a vehicle to the time they are combusted. *Id.* When used as a fuel, they are in the chain of commerce and are managed as a valuable product. Accordingly, they are not discarded, but are instead properly classified as a product fuel.

Environmental Petitioners do not challenge any of these points, but rather argue that based on "common sense," tires are discarded when removed from vehicles. *See Env't Pet'rs Br.* at 27-28. Environmental Petitioners' simplistic

approach ignores both the actual nature of the transaction and the existing system for the management of tires. When a car needs new tires, the owner does not go to a tire dealer to discard their tires, but to purchase new tires. As part of the service of providing new tires, the dealer removes the old tires. The dealer then takes possession of the tires. If the dealer participates in a used tire collection program, the tires are transferred to an entity that collects them and they are ultimately used as fuel or processed into a fuel.⁸ Thus, the tires are a product, first as a component of a vehicle, and then as a fuel. Because tires are a legitimate product fuel as measured both by their fuel value and contaminant levels, and are handled as a valuable product throughout their life, EPA reasonably determined that tires managed under the oversight of an established tire collection program are not solid waste when combusted.

⁸ Environmental Petitioners' claim that this provision would somehow lead to a determination that household waste "collected" at the curb is no longer solid waste or that RCRA's prohibition on "open dumping" would be rendered a nullity, Env't Pet'rs Br. at 31-32, is nonsensical. EPA has not said that mere collection makes a material a non-waste, but rather that a specific set of collection programs, which are designed to comprehensively address the problem of used tires to ensure that they are managed in an environmentally protective manner, constitutes management of the tires as a useful product. Furthermore, a material must meet all of the legitimacy criteria, *i.e.*, management, heating value, and contaminant levels, for it to be classified as a product fuel.

Finally, the fact that Congress exempted qualifying small power production facilities and cogeneration facilities that burn homogenous wastes such as tires or used oil from the definition of “solid waste incineration unit” in Clean Air Act section 7429, 42 U.S.C. § 7429(g)(1), *see* Env’t Pet’rs Br. at 37-38, provides no support for Petitioners’ claim. Congress created that exemption for the purpose of encouraging the development of alternative energy sources, and the exemption reflects the nature of facilities that at the time were combusting tires. *See* S. Rep. No. 101-228 at 145 (1989). Given that purpose, it would be bizarre to read that provision as requiring EPA to classify small power production facilities and cogeneration facilities as boilers regulated under Clean Air Act section 7412, 42 U.S.C. § 7412, while simultaneously classifying all other units burning used tires for energy recovery (*i.e.*, the exact same alternative energy source that Congress was trying to promote) as solid waste incinerators regulated under Clean Air Act section 7429, 42 U.S.C. § 7429.⁹

⁹ Although Environmental Petitioners discuss old corrugated cardboard in their argument, Env’t Pet’rs Br. at 48-49, nothing in the Rule specifically addresses the status of that material, and thus there is no final agency action regarding old corrugated cardboard for Petitioners to challenge. In the preamble, in the context of rejecting a claim by commenters that such materials should be classified as a traditional fuel, EPA stated that it “believ[ed]” that such materials are not discarded because they are part of an industrial process, 76 Fed. Reg. at 15,486-87, but it made no finding or determination that the materials are not solid waste. Furthermore, EPA is now conducting a rulemaking specifically to
(Footnote continued)

V. THE DISTINCTION IN THE RULE BETWEEN NON-HAZARDOUS SECONDARY MATERIALS COMBUSTED BY THE GENERATOR FOR ENERGY RECOVERY AND THOSE TRANSFERRED TO ANOTHER ENTITY FOR COMBUSTION FOR ENERGY RECOVERY IS REASONABLE

This Court has repeatedly recognized that the question of whether a particular secondary material has been discarded is a complex one, and the situations EPA must address in making that determination cover a broad spectrum from in-process secondary materials, which the Court has held are not solid waste as a matter of law, to materials that are indisputably discarded. *API II*, 216 F.3d at 55-56. In between are a broad range of situations where EPA must exercise its discretion to determine whether a particular material is part of the solid waste problem. *Id.* at 57 (citation omitted) (“Where an industrial by-product may be characterized as discarded or ‘in process’ material, EPA’s choice of characterization is entitled to deference); *AMC II*, 907 F.2d at 1186 (the term “discarded” is “marked by the kind of ambiguity demanding resolution by the agency’s delegated lawmaking powers.”).

determine whether these materials should be categorically determined not to be solid waste. 79 Fed. Reg. at 21,033. Thus, even if Environmental Petitioners could be construed as stating a claim, it is prudentially unripe. Finally, the alleged inconsistency in EPA’s preamble statements is illusory because the two discussions concern different materials, paper generally at 76 Fed. at 15,478 and old corrugated cardboard specifically at 76 Fed. Reg. at 15,487.

In the Rule, EPA faced the task of developing criteria and standards for determining which non-hazardous secondary materials are solid waste when combusted for the purpose of implementing Clean Air Act sections 7412 and 7429, 42 U.S.C. §§ 7412, 7429, in accordance with the Court's remand in *NRDC*. After reviewing the available information on the combustion of non-hazardous secondary materials, EPA determined that it is appropriate to take different approaches to materials that are retained by the generator for use as a product fuel and those that are transferred to another entity for use as a fuel. Where the generator retains a non-hazardous secondary material that meets the legitimacy criteria for heat content and contaminant levels, and manages that material as a valuable product in accordance with the legitimacy criteria, EPA determined that it is reasonable to conclude that the material has been saved and used as a product fuel, rather than discarded. 76 Fed. Reg. at 15,532-33 (JA 148-49).

Those same considerations may not apply, however, when materials are transferred from the generator to another entity for use as a fuel. *Id.* at 15,471 (JA 87). Specifically, the Agency determined that the party to whom the material is transferred may not have the same incentive to manage it as a useful product as does the generator. 75 Fed. Reg. at 31,875 (JA 53). This concern is supported by a number of analyses in the record of secondary material recycling. *Id.* For example, one analysis of environmental problems associated with recycling of

hazardous secondary materials found that 80 percent of the damage incidents reviewed were associated with recycling by third parties. Dkt. No. EPA-HQ-RCRA-2002-0031-0355 at p. 9 (Attached¹⁰). *See also* Dkt. No. EPA-HQ-RCRA-2008-0329-0423 (JA 317-22) (describing adverse environmental impacts associated with third-party recycling of non-hazardous secondary materials). Consistent with this analysis, under the Rule, as-generated non-hazardous secondary materials that are used as a fuel in facilities not under control of the generator are solid wastes unless EPA has determined that the material should instead be regulated as a product fuel. The Rule provides specific mechanisms for interested parties to request such determinations.

Moreover, during the rulemaking process, EPA specifically requested comments on whether specific non-hazardous secondary materials should be classified as product fuels when used as a fuel, whether by the generator or by another entity. 74 Fed. Reg. at 56-60 (JA 16-20), 75 Fed. Reg. at 31,861-69, 31,874-75 (JA 39-47, 52-53). The Agency thoroughly reviewed the information submitted by commenters and determined that it had sufficient information to determine that (1) scrap tires that are not discarded and are managed under the oversight of established tire collection programs; (2) resinated wood; and (3) coal

¹⁰ This document was inadvertently not included in the Joint Appendix.

refuse that has been recovered from legacy piles and processed in the same manner as currently-generated coal refuse are not solid waste when combusted either by the generator or by another entity. 40 C.F.R. § 241.4(a); 78 Fed. Reg. at 9153-71 (JA 236-54). As part of the rulemaking, the Agency received comments requesting that the Agency list additional materials as categorical non-wastes. EPA noted that these comments were beyond the scope of the rulemaking and that, because the Agency did not specifically solicit comments or propose that those non-hazardous secondary materials be categorically listed in 40 C.F.R. § 241.4(a), it would not be appropriate for the Agency to make a final decision on them without going through notice and comment rulemaking. 78 Fed. Reg. at 9171-74, 76 Fed. Reg. at 15,477-15,516 (JA 254-57, 93-132). Petitions for categorical determinations have been submitted for some of these materials and are under review by the Agency. *See* p. 12, *supra*.

This approach is reasonable and entirely consistent with the statute. As this Court has recognized, in implementing environmental statutes, including RCRA, EPA may resolve uncertainty in favor of minimizing risk to human health and the environment. *Am. Chemistry Council v. EPA*, 337 F.3d 1060, 1065-66 (D.C. Cir. 2003); *see also Am. Trucking Ass'ns*, 283 F.3d at 369. Moreover, within the RCRA context, the Court has specifically held that it is permissible for EPA to place the burden on the regulated entity to demonstrate that its materials should not

be regulated where otherwise EPA would be faced with the “nearly impossible” burden of anticipating and analyzing every conceivable situation that might arise. *Am. Chemistry Council*, 337 F.3d at 1065.

Industry Petitioners’ challenge to this provision of the Rule (Ind. Pet’rs Br. at 7-21) has no basis in either law or fact. First, while Petitioners assert that the Rule inappropriately categorizes “alternative fuels” as solid waste, they identify no non-hazardous secondary material that they claim is inappropriately being categorized as solid waste by this provision of the Rule.¹¹ Rather, their argument appears to be that because the Rule might characterize some hypothetical non-hazardous secondary materials as solid waste that could be characterized as product fuels, the Rule is invalid. Petitioners also claim that the definition of solid waste must, as a matter of law, provide that no non-hazardous secondary material is a solid waste when combusted regardless of its fuel value and level of contamination, unless EPA makes a specific determination that the material is a solid waste. *See* Ind. Pet’rs Br. at 8-12.

¹¹ Petitioners vaguely allude to “alternative fuels” that are combusted in sulfuric acid recovery units. Ind. Pet’rs Br. at 15. However, neither Petitioners’ brief nor the cited comments identify what those “alternative fuels” are or present any rationale as to why these unidentified materials are not solid waste when combusted.

That argument, however, cannot be reconciled with this Court's case law. First, it is exactly the argument that the Court rejected in *American Chemistry Council*, where the Court upheld EPA's rule determining that, unless specifically delisted, mixtures containing a listed hazardous waste and residues derived from treatment of a listed hazardous waste remain a listed hazardous waste. 337 F.3d at 1065. While that case specifically addressed hazardous waste, this principle applies to EPA's regulation of non-hazardous solid waste as well. In implementing the goal of RCRA to protect human health and the environment, EPA can require the regulated entity to demonstrate that its material should not be subject to regulation. In this case, as in *American Chemistry Council*, EPA is faced with developing a general rule that will apply to hundreds of secondary materials, the combustion of which will, in a significant number of cases, constitute disposal either because it lacks sufficient heating value to be a product fuel or because its levels of contaminants are not comparable to, and, in some cases, significantly exceed those found in traditional fuels. In such circumstances, EPA is well within its statutory authority to determine that these materials should be classified as solid waste until an interested party demonstrates to the Agency that the material should be classified as a product fuel.

Furthermore, the only circumstance in which this Court has held that a secondary material is not a solid waste as a matter of law are materials that are

reused in an ongoing industrial process. In other circumstances, the Court has held that the determination as to whether a particular secondary material is a solid waste is fact-specific and is committed to EPA's discretion. *API II*, 216 F.3d at 57; *AMC II*, 907 F.2d at 1186; *Safe Food*, 350 F.3d at 1268-69.

Petitioners' argument misstates the nature of the Rule. EPA has not determined that non-hazardous secondary materials transferred to a third party are *per se* discarded. Ind. Pet'rs Br. at 10. To the contrary, EPA recognized that transfer is only one factor to consider in determining whether a particular non-hazardous secondary material is discarded when combusted for energy recovery and specifically created processes by which entities can seek a determination from EPA that a particular material is not a solid waste when combusted for energy recovery either on a case-by-case basis or a more general categorical basis. As discussed above, what EPA did do in the Rule, in light of the huge and varied universe of non-hazardous secondary materials that are combusted for their fuel value and the Agency's need to promulgate a definition of solid waste pursuant to this Court's remand in *NRDC*, was to determine that it is appropriate to regulate transferred materials as solid waste unless EPA determines that a particular material should instead be regulated as a product fuel, and to place the responsibility on the generator or burner to demonstrate that a particular material is not discarded when combusted.

Finally, there is no basis for Petitioners' claim that the Rule is not supported by the record. Ind. Pet'rs Br. at 16-20. While Petitioners criticize the fact that EPA pointed to a limited number of environmental damage incidents as support for the Rule, Petitioners identify nothing in the record to support their claim that EPA's reliance on those episodes was unreasonable. In fact, as discussed above, Petitioners do not identify a single specific material other than paper recycling residuals that they contend is improperly classified under this portion of the Rule, let alone provide any evidence to demonstrate that all non-hazardous secondary materials transferred to other parties for combustion for energy recovery are managed as valuable products. Nor do Petitioners deny that transferred materials are generally not being reused in an ongoing industrial process. In short, Petitioners have presented no basis to demonstrate that the Rule is either unlawful or arbitrary and capricious.

VI. SEWAGE SLUDGE IS NOT STATUTORILY EXCLUDED FROM REGULATION AS A SOLID WASTE

Industry Petitioners challenge EPA's determination not to exclude sewage sludge from the definition of solid waste when combusted contending that sewage sludge is excluded from the statutory definition of solid waste. Ind. Pet'rs Br. at 22-30. This claim is without merit.

First, this Court has already at least implicitly determined that sewage sludge combusted in sewage sludge incinerators is a solid waste. In *National Ass’n of Clean Water Agencies v. EPA*, 734 F.3d 1115 (D.C. Cir. 2013) (“NACWA”), this Court reviewed emission standards that EPA had promulgated under Clean Air Act section 7412, 42 U.S.C. § 7412, for sewage sludge incinerators.¹² In that case, the National Association of Clean Water Agencies and Hatfield Township Municipal Authority, both of whom are also Petitioners in this case, challenged the Rule on the ground that the Clean Air Act’s definition of “solid waste incineration unit” excluded sewage sludge incinerators. 734 F.3d at 1125. The Court rejected that claim, upholding EPA’s determination that sewage sludge incinerators are “solid waste incineration units.” *Id.* at 1130. A “solid waste incineration unit” is defined in pertinent part as “a distinct operating unit of any facility which combusts any *solid waste* material . . .” 42 U.S.C. § 7429(g)(1) (emphasis added). Thus, in deciding that sewage sludge incinerators are solid waste incineration units, the Court necessarily determined that sewage sludge is a solid waste.

The Petitioners do not address the holding in *NACWA* in their brief, nor do they contend that their claim is addressed to combustion units other than sewage sludge incinerators. However, even if Petitioners could raise this claim, it is

¹² That regulation was promulgated the same day as the Rule at issue in this case.

meritless because it is inconsistent with the language and structure of the statutory definition of “solid waste.” That definition is structured to have specific inclusions and exclusions. One type of material specifically included is “sludge from a waste treatment plant.” 42 U.S.C. § 6903(27). The statute defines “sludge” in pertinent part as “any solid, semisolid or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant . . .” *Id.* § 6903(26A). Sewage sludge is generated from a municipal wastewater treatment plant, and thus is specifically defined as a separate material from the domestic sewage referred to in section 6903(27), 42 U.S.C. § 6903(27).

Notwithstanding this clear statutory language, Petitioners nonetheless argue that sewage sludge is excluded because the definition excludes “solid or dissolved material in domestic sewage.” *Id.* § 6903(27); Ind. Pet’rs Br. at 38-42. However, sewage sludge is not “domestic sewage,” but rather a separate material, *i.e.*, a “sludge” that is produced by treatment of domestic sewage. Furthermore, the structure of the statute makes clear that the purpose of the exclusions from the definition of solid waste are intended to avoid duplication with other regulatory schemes. The exclusions cover three aqueous streams (domestic sewage, irrigation return flows, and industrial point source discharges) that are addressed by the Clean Water Act. The purpose of the exclusions is to avoid any implication that solid materials dissolved in or carried along in these aqueous streams are also

subject to regulation under RCRA. The fourth exclusion addresses source, special nuclear, and byproduct material, which are regulated by the Department of Energy, and is also intended to avoid duplicative regulation.

This has been EPA's interpretation of the statute dating back to 1980. 76 Fed. Reg. at 15,514/2 (JA 130). Although Petitioners cite a footnote in a 1990 preamble that is to the contrary, that footnote was contrary to EPA's well-established regulatory interpretation and EPA has acknowledged that it was erroneous. *Id.* Although Petitioners also cite to 40 C.F.R. § 261.4(a)(1)(i), (ii), that provision merely states that "domestic sewage" and "any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment" are not solid wastes. It thus provides no support to Petitioners' claim that the sludge produced in the treatment works is not a solid waste.

Finally, there is no basis for Petitioners' argument that RCRA section 6905(b)(1) creates a non-discretionary duty for EPA to determine that sewage sludge is not solid waste when combusted for energy recovery. That provision provides that "The Administrator shall integrate all provisions of this chapter for purposes of administration and enforcement and shall avoid duplication, *to the maximum extent practicable*, with the appropriate provisions of the Clean Water Act." 42 U.S.C. § 6905(b)(1) (emphasis added). The provision further provides

that “Such integration shall be effected *only* to the extent it can be done in a manner consistent with the goals and policies expressed in this chapter and in the other acts referred to in this subsection.” *Id.* (emphasis added). First, this Court has already rejected Petitioners’ claim that Congress intended the Clean Water Act to be the sole mechanism for regulating sewage sludge and that the regulation of sewage sludge incinerators under the Clean Air Act is inconsistent with the Clean Water Act. *NACWA*, 734 F.3d at 1129.

Furthermore, RCRA section 6905(b)(1)’s clear statements that duplication should be avoided “to the maximum extent practicable” and that integration occur “only” when consistent with the goals of the policies of the statute, 42 U.S.C. § 6905(b)(1), demonstrate that this provision does not create a non-discretionary duty, but rather, leaves to EPA’s discretion the determination of what is practicable and whether integration is consistent with statutory requirements. In this case, EPA reasonably determined that such integration is not possible because EPA is required to determine, under RCRA, whether sewage sludge is a solid waste when combusted for energy recovery, which in turn enables EPA to determine whether such combustion units are regulated under Clean Air Act section 7412 or 7429, 42 U.S.C. §§ 7412, 7429. 76 Fed. Reg. at 15,513/3 (JA 129). EPA does not make solid waste determinations under the Clean Water Act, and thus its regulations under that statute do not fulfill EPA’s obligation under RCRA. Moreover,

although EPA does regulate the incineration of sewage sludge under the Clean Water Act, as noted above, this Court has already upheld EPA's authority to also regulate it under the Clean Air Act. *NACWA*, 734 F.3d at 1129.

CONCLUSION

The petitions for review should be denied.

Respectfully submitted,
SAM HIRSCH
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November 12, 2014

CERTIFICATE OF COMPLIANCE WITH WORD LIMITATION

Pursuant to Federal Rule of Appellate Procedure 32(a)(7)(C), I hereby certify that the foregoing Brief of Respondent EPA contains 15,080 words as counted by the Microsoft Office Word 2013 word processing system, and thus complies with the applicable word limitation.

/S/ Norman L. Rave, Jr.
Norman L. Rave, Jr.

CERTIFICATE OF SERVICE

I hereby certify that on November 12, 2014, the foregoing Brief of Respondent was served electronically through the Court's CM/ECF system on all registered counsel.

/S/ Norman L. Rave, Jr.
Norman L. Rave, Jr.

ATTACHMENT

An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials

January 11, 2007



**U.S. Environmental Protection Agency
Office of Solid Waste**

DISCLAIMER

Mention of trade names, products or services in this document does not convey, and should not be interpreted as conveying, official EPA approval, endorsement, or recommendation, or lack thereof.

ACKNOWLEDGEMENTS

This study was funded and managed by the U.S. Environmental Protection Agency. Data collection and presentation were conducted by ICF Environmental Consulting, Inc. under contract to the Environmental Protection Agency.

Staff members of the Resource Conservation and Recycling Branch, Office of Solid Waste, EPA Headquarters were responsible for providing objectives of the study, reviewing the methodology, helping to identify cases for further investigation, reviewing draft writeups and drafting portions of the report. The EPA Work Assignment Managers were David Eberly and Tracy Atagi. Dave Fagan and Amy Lile were key contributors and reviewers.

Staff of ICF Environmental Consulting, Inc. were responsible for identifying and investigating potential cases, assembling relevant information, contacting persons with knowledge of selected cases, drafting descriptions of each case, and compiling summary statistics. EPA wishes to acknowledge the contributions made by ICF staff members Stephanie Barrett (Research Manager), Brandy Bones and Jennifer Brickett.

An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials

I. Introduction

This study was conducted as part of the U.S. Environmental Protection Agency's effort to revise the current "definition of solid waste" under the Resource Conservation and Recovery Act (RCRA), as it pertains to recycling of hazardous wastes and other hazardous secondary materials. The information in this report is expected to assist the Agency in making decisions as to the scope and substance of these regulatory revisions.

In an October 28, 2003 Federal Register notice, EPA proposed to revise the definition of solid waste by excluding from regulation hazardous secondary materials that are "generated and reclaimed in a continuous process within the same industry." See 68 FR 61558, October 28, 2003. That regulatory proposal resulted in more than two hundred comments being submitted to the Agency, from a wide range of stakeholders. In general, the commenters' reactions to the proposal were less than favorable, for various reasons, and many commenters suggested alternative approaches to resolving issues associated with the current definition of solid waste.

A number of commenters to the 2003 proposal criticized the Agency specifically for not having conducted a thorough study of the potential impacts of these regulatory changes. These commenters expressed the general concern that de-regulating hazardous recyclable materials in the manner proposed could result in mismanagement of materials, and thus could create new cases of environmental damage that would require remedial action under federal or state authorities. Some of the commenters further cited a number of examples of environmental damage cases that were attributed to hazardous material recycling, including a number of sites listed on the Superfund National Priorities List (NPL).

In deliberating as to how to proceed with this rulemaking effort, the Agency decided that additional data on recycling damage cases, as well as data on successful, environmentally beneficial recycling practices, would benefit the regulatory decision process, and would provide stakeholders with a clearer picture of the hazardous material recycling industry in this country. Accordingly, EPA chose to conduct these recycling studies, and consider their findings, before making decisions as to the appropriate direction for this rulemaking. This report documents the findings of the Agency's study of environmental problems that have been associated with hazardous material recycling. A separate report entitled "An Assessment of Current Good Practices for Recycling of Hazardous Secondary Materials" documents current good practices for recycling of hazardous secondary materials, and is also part of the administrative record for this rulemaking effort. In addition, a study of the economics of hazardous material recycling, entitled "Potential Effects of Market Forces on the Management of Hazardous Recyclable Materials" is part of the record.

II. Scope of the Study

The general goal of this study was to identify and characterize cases of environmental damage that have been attributed to some type of hazardous material recycling activity, and that are relevant for the purpose of this rulemaking effort. Specifically, we sought to identify the following types of cases:

- *Cases where environmental damage can be attributed to some type of recycling activity.* In conducting this study, we wished to identify damage cases in which environmental damages were caused by some type of recycling-related activity. In this context, “recycling-related activities” included accumulation or storage of materials by the generator, the recycler or an intermediary, illegal disposal or abandonment of recyclable materials or recycling residuals, transportation of recyclable materials, “sham” recycling operations (i.e., illegal disposal or treatment disguised as recycling), production and/or use of contaminated products from recycled materials, reclamation and/or production processes, management of residuals from reclamation or production processes, or other activities associated with the management of recyclable materials, recycling residuals, or the products of recycling processes.

This study did identify a number of cleanup sites at which a recycling process had operated, but where other sources of contamination made it extremely difficult to determine with any certainty that the recycling activity contributed to the environmental problems at the site. These cases were not included in our compilation of damage cases.

- *Relatively recent cases.* Many of the damage cases that were examined in the course of this study occurred before RCRA, CERCLA or other environmental programs were established in the early 1980s. As a number of commenters on the 2003 proposed rule noted, these environmental programs – most notably, the liability provisions of CERCLA – have created strong incentives for proper management of recyclable materials and recycling residuals. Several commenters further noted that because of these developments, industrial recycling practices have changed substantially since the early 1980s, and present day generators and recyclers are much better environmental stewards than in the pre-RCRA/CERCLA era. Thus, they argue, “historical” recycling-related damage cases are not particularly relevant or instructive with regard to modifying the current RCRA regulations for hazardous material recycling. The Agency generally agrees with this viewpoint, in part because our companion study of current good hazardous material recycling practices has documented that responsible generators and recyclers do make considerable efforts to ensure that materials are recycled and otherwise managed in a safe, environmentally protective manner.

In the course of this study it became apparent that while the CERCLA statute and the initial RCRA hazardous waste regulations became effective in 1980, there was an initial “phase in” period during which industry and other affected entities began to change their practices with regard to hazardous material recycling, and during which federal and state agencies were developing guidelines and procedures for implementing these new authorities. Perhaps not surprisingly, our study identified a number of recycling damage cases that occurred during the early 1980s that appeared to have been caused by companies and individuals who were not cognizant of their new responsibilities and potential liabilities under RCRA and CERCLA. Because we believe that recycling damage cases that have occurred within the current environmental regulatory and liability systems are most relevant to the definition of solid waste rulemaking effort, our study identified and described only those cases in which some form of environmental damage appears to have occurred during or after the year 1982. We did not however, exclude cases where damages occurred both before and after 1982.

- *Cases involving recycling of regulated hazardous wastes, or hazardous secondary materials that are specifically excluded from RCRA regulation.* This study was intended to identify damage cases associated with recycling of regulated hazardous wastes, as well as cases involving recycling of hazardous materials that are not regulated because they are subject to a specific regulatory exemption or exclusion (see, for example, the exclusions in 40 CFR 261.4). The Agency is interested in these types of damage cases because they may indicate the extent to which environmental damages can occur even when recycling is conducted under a stringent regulatory regime, and whether such damages may be more or less prevalent for materials that are explicitly exempted or excluded from RCRA regulatory controls. The study was not designed to identify cases involving recycling of non-hazardous materials such as paper, glass, rubber or plastics.

III. Methodology

The initial task of this study was to identify recycling-related environmental damage cases that were relevant to the scope and purpose of the study (the preceding section of this report describes the types of cases that were considered relevant to the study). Potential cases were identified from a variety of sources, including:

- Comments on the October 28, 2003 proposed rule
- The Superfund National Priorities List
- National EPA data bases maintained for the CERCLA, RCRA and enforcement programs
- Contacts with staff in state environmental agencies
- Contacts with staff in EPA Regional Offices
- State agency data bases maintained for state superfund programs and other environmental programs
- Internet searches
- News media reports

It should be noted that because of time and resource limitations, the search for potentially relevant damage cases was not exhaustive. For example, we did not systematically survey all state environmental agencies for relevant cases, nor did we search paper files in EPA Regional Offices. Because of these limitations, we believe that the cases we have identified and described in this report in effect represent the cases that were relatively easy to find, and that there are likely to be a significant number of additional relevant cases that we did not identify.

Once a potentially relevant case was identified, EPA's contractor personnel assembled relevant information to determine whether or not the case fit within the scope of the study. If the damage case was considered a likely candidate for the study, further information was gathered with the intent of identifying certain key facts about the case that the Agency believed would be particularly informative for the purpose of this rulemaking. These key facts included:

- Name, location and EPA Identification Number (if available) of the site
- Types of materials that were recycled, or intended to be recycled
- The government program responsible for overseeing the cleanup of the site, and whether or not the site is or was listed on the Superfund National Priorities List (NPL)
- Brief description of the site

- Basic site history, including when the recycling occurred, and when the environmental damage occurred
- Basic description of the recycling process
- The type(s) of environmental damage that occurred
- The types of activities or circumstances that caused the environmental damage
- Whether or not human health impacts, including deaths, were associated with the damage
- Whether or not those responsible for the environmental or human health impacts were prosecuted for criminal violations
- Whether the materials were recycled on-site (i.e., at the generating facility) or at an off-site recycling facility
- Whether or not the recycler went bankrupt or otherwise went out of business
- Whether or not the recycling facility had a RCRA Part B permit for managing hazardous wastes¹
- Cost of cleaning up the site
- Other information that could help identify why the environmental damage occurred

Many of the cases that were investigated were well documented, and we were able to assemble virtually all of this information. This was the case, for example, for many of the Superfund NPL sites. However, in many other cases it was not possible given the limitations of the study to document all of these facts. Often, there was considerable technical information as to the nature and extent of the contamination at the site, but relatively little information regarding the activities and circumstances that originally caused it. For some of the sites, we were able to collect only very basic information.

For each of the 208 cases that fit within the scope of the study, a written description was prepared, and key data for each site (as available) were entered onto a summary table. The summary table is presented as Appendix 1 of this report, and is organized alphabetically by State. Appendix 2 contains each of the 208 case descriptions, organized in the same way. Appendix 3 is a listing of the damage cases that were reviewed but were not investigated in detail, either because they did not fit within the scope of the study, or because there was insufficient information to make that determination.

IV. Summary of Findings

This study identified 208 cases in which environmental damage of some kind occurred from some type of recycling activity, and that appeared to clearly fit within the scope of the study, as described above. In this context, we used the term “environmental damage” broadly, to include leaks, spills, dumps or other types of releases of hazardous substances into the environment that were serious enough to require some type of cleanup action. It also includes situations in which materials were abandoned (e.g., in warehouses) without having been actually released into the environment, but which posed potential threats and thus required removal actions that were conducted by one or more government agencies, and involved expenditure of public funds.

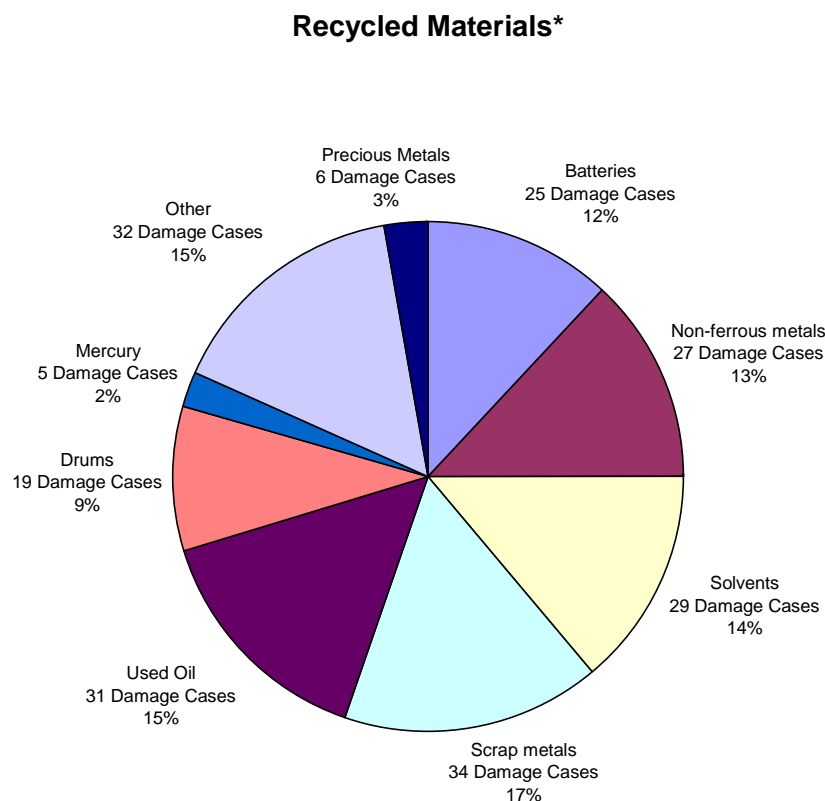
¹ Note that RCRA Part B permits are not required for hazardous waste recycling processes or operations themselves; in general, Part B permits are issued, as applicable, for storage of hazardous wastes prior to recycling.

We did not include in the study cases in which environmental regulatory violations occurred, but did not result in actual damage to the environment or to human health. For example, we found a number of cases where recycling facilities had been subject to enforcement actions for RCRA regulatory violations (e.g., inaccurately completed manifests), but where there did not appear to have been any releases to the environment that required cleanup. These types of cases were not included in the 208 damage case profiles, though they are identified in Appendix 3 to this report.

Types of Recyclable Materials

Exhibit 1 presents a breakdown of the primary types of materials that were recycled (or were expected to be recycled) at the site where the environmental damage occurred. Note that there is some overlap between these categories, since in many cases more than one type of material was recycled at the site. For example, while scrap metals were the primary material recycled at 17% of the sites, at many of these sites spent lead-acid batteries, or residuals from their recycling, contributed to the contamination problems at the site. Only sites where batteries were the primary material recycled (12% of sites) are identified specifically as battery damage cases.

Exhibit 1: Recycled Materials



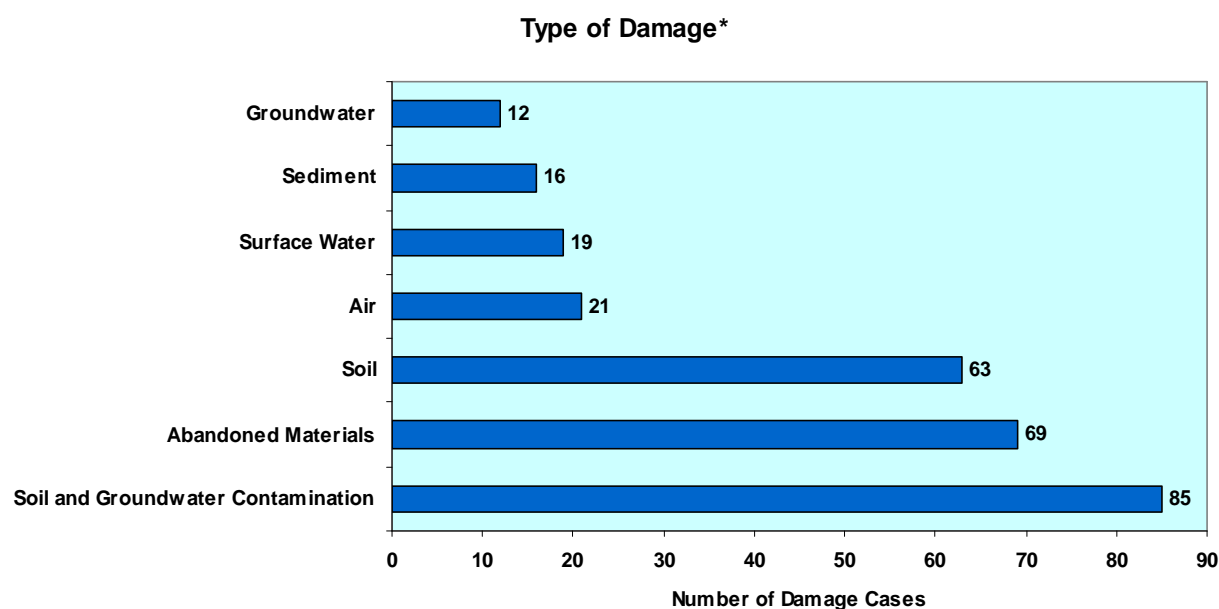
**For some damage cases, there was more than one kind of material recycled at the site. This chart includes only the material which was recycled most often at the site.*

In addition to batteries and scrap metals, other types of recyclable materials primarily managed at multiple sites include used oil (15% of sites), solvents (14%), and non-ferrous metals such as brass, aluminum, or magnesium (13%). Drum reconditioning sites accounted for 9% of the sites, precious metals 3%, and mercury 2%. “Other” types of materials account for 15% of the sites, and include a wide variety of recyclables such as foundry sands, pollution control dusts, smelting wastes, combustion ash, asphaltic wastes, etc.

Types of Environmental Damage

Exhibit 2 summarizes the types of environmental damages that were found to have occurred at the recycling sites that were investigated.

Exhibit 2: Type of Damage



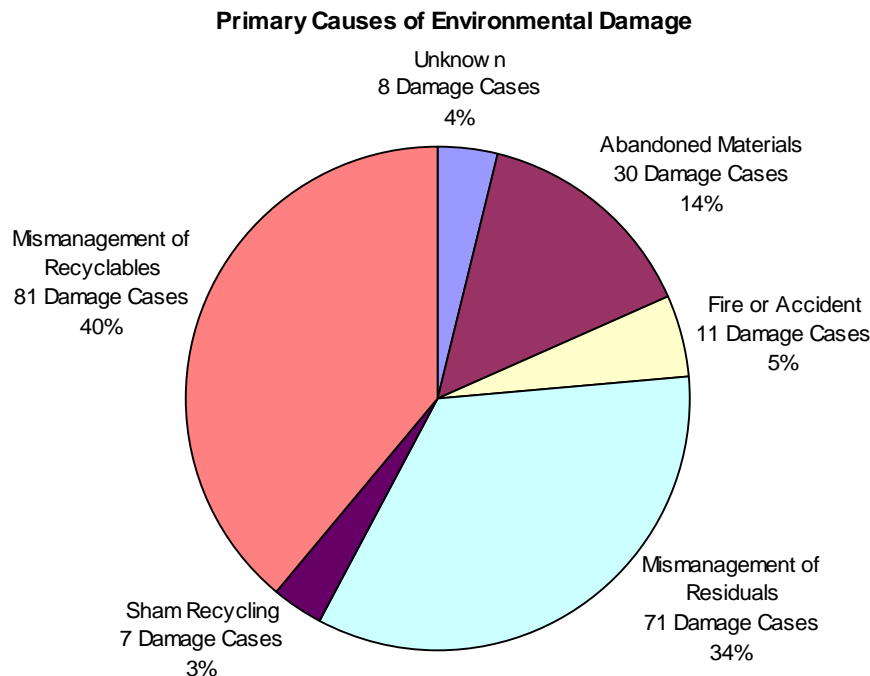
**For many damage cases, there was more than one type of damage. Every type of damage is captured in this chart, therefore there are more damage types than there are damage cases.*

Note that, as in Exhibit 1, there is some overlap with regard to the incidences of environmental damages found at the 208 sites that were documented, since at a number of sites more than one type of damage appears to have occurred (abandoned materials and soil contamination, for example). The most common type of environmental damage was a combination of soil and groundwater contamination, while a surprising number of sites (69) involved abandonment of materials. Sites involving abandoned materials included those where the materials caused environmental damages (e.g., leaking containers improperly stored out of doors), as well as those where actual environmental problems directly associated with the abandoned materials were not documented, but nevertheless required removal actions. The relatively high incidence of abandoned materials likely reflects the fact that bankruptcies or other types of business failures were associated with two thirds (138) of the sites investigated, though business failure may not have been a direct cause of the environmental problems in all cases.

Damage Causes

While our analysis did not attempt to probe in great detail the exact actions or circumstances that led to contamination problems at these sites, in most cases we were able to identify in general terms the primary cause of the contamination. These primary causes, and the number of cases attributable to them, are presented in Exhibit 3. As with Exhibit 1, there is overlap between these breakdowns for these primary causes, since for example, at a number of sites damage occurred from improperly disposed recyclables as well as the residuals generated from recycling processes.

Exhibit 3: Causes of Environmental Damage



Mismanagement of recyclable materials prior to their reclamation or reuse was the most common cause of contamination at these sites (40%), while almost as many sites involved mismanagement of recycling residuals (34%) as the primary cause. Often, at the latter category of sites, reclamation processes generated residuals in which the toxic components of the recycled materials became concentrated, and these wastes were then mismanaged. Examples of this include a number of drum reconditioning facilities, where large numbers of used drums were cleaned out to remove small amounts of remaining product such as solvent, and these wastes were then improperly stored or disposed.

Thirty of the cases that were examined for this study (14%) involved abandonment of recyclable materials as the primary cause of damage. In most of these cases, business failure appears to have been the main reason the materials were abandoned. In 5% of the cases examined (11 sites), fire and/or accident was the primary cause of damage. Seven of the cases that were examined appear to have been outright “sham” recyclers. In most of these cases,

companies advertised themselves to local generators as recyclers and accumulated considerable quantities of waste materials, but apparently did not intend to actually do any recycling. These sites were also then abandoned. For 4% of the cases we examined, we were unable to determine the primary cause of the damage.

On-Site vs. Off-Site Recycling

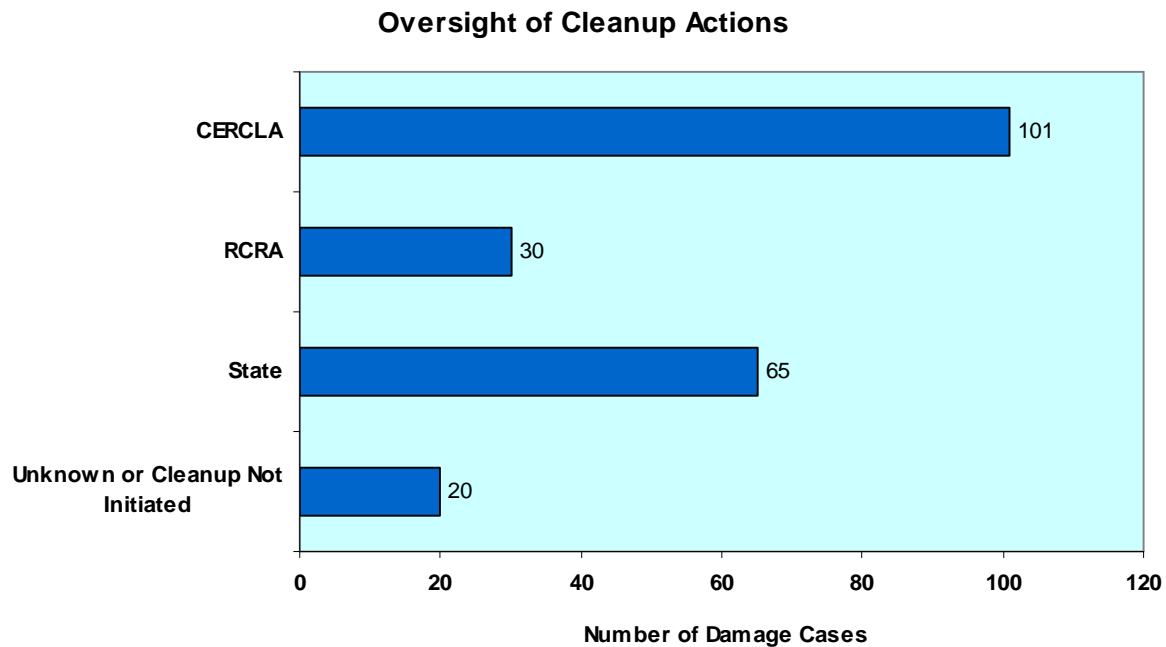
One of the questions we wanted to examine in this study was whether or not there may be any significant differences in the frequency, type or causes of environmental damages with regard to recycling that is conducted “on-site” (i.e., at the facility that generated the recyclable secondary materials), as compared to off-site, commercial recyclers. In the preamble to the 2003 proposed rule (68 FR at 61575) the Agency requested comment on the option of promulgating a regulatory exclusion for materials that are generated and recycled at the same facility. A number of commenters to the proposal supported this regulatory option, arguing that this type of recycling is considerably less likely to result in environmental problems than recycling at commercial, off-site facilities.

Of the 208 damage cases documented in this report, 13 (6%) involved on-site recycling by the generator, and another 7 (3%) involved on-site and off-site recycling. This relatively small number of cases may indicate that this type of recycling is inherently less environmentally “risky” than recycling at commercial facilities. However, it may also be that on-site recycling is simply a less common practice, or that these types of damage cases are less well documented, and thus more difficult to identify than cases involving commercial recyclers. In any case, it should be noted that several of the on-site damage cases, including Standard Chlorine of Delaware and the Monsanto P4 facility, were apparently among the most expensive cleanup sites that we documented.

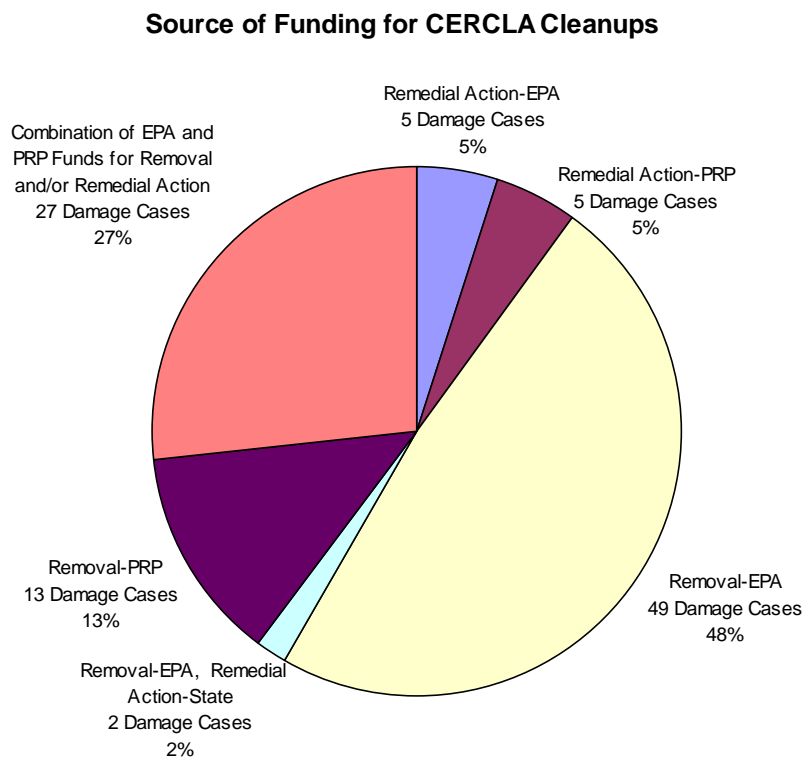
Oversight of Cleanup Actions

The great majority of damage cases we investigated involved removal or remediation actions that were (or still are) overseen by, and often funded by, federal or state environmental cleanup programs. Exhibit 4 presents a breakdown of the cleanup programs that have been involved with oversight of these cleanup actions. Several sites were cleaned up under more than one program.

The federal CERCLA program was involved with oversight of 101 of the 208 cases that were documented, or 49%. Cleanup under CERCLA may involve emergency removal or remedial, each of which can be funded by EPA, State, or Potentially Responsible Party (PRP) funds, or a combination of these. Exhibit 5 indicates the types of cleanups that occurred under CERCLA and the funds that paid for each. Almost half (48%) of the damage cases were cleaned up under EPA-funded emergency removals, and 27% were cleaned up using a combination of funding sources and remedial and/or removal actions.

Exhibit 4: Oversight of Cleanup Actions

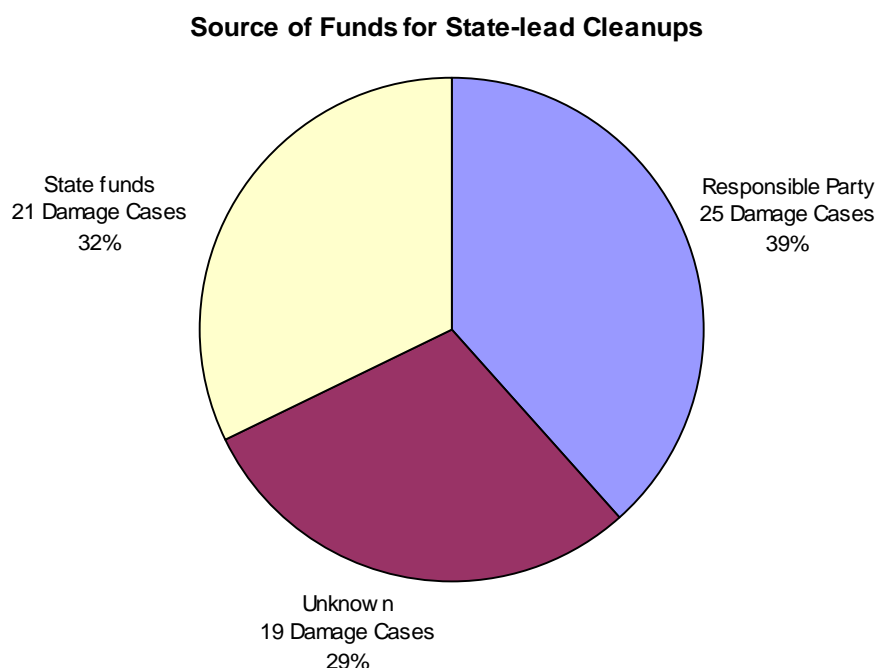
**For many damage cases, there was more than one type of cleanup action. Every type of cleanup is captured in this chart, therefore there are more cleanup actions than there are damage cases.*

Exhibit 5: Funding of CERCLA Cleanups

Of the cases that were cleaned up under the CERCLA program, 46 were or are sites listed on the National Priorities List (NPL). Five damage cases were listed on the NPL but have not yet had cleanup initiated under CERCLA. The other 55 CERCLA cleanup cases not listed on the NPL.

State programs were responsible for oversight at 65 sites, and Exhibit 6 shows what source of funds were used for these cleanups. The results are split almost evenly among state funds, such as orphan funds or hazardous waste taxes, responsible party funds, and unknown funding. The latter group consists of site where the funding source was not clear and included cases of enforcement actions and consent decrees.

Exhibit 6: Funding of State-lead Cleanups



RCRA Corrective Action, which is administered by both states and the US EPA, was in effect at 30 sites (14%). For 20 sites, we were unable to identify which government program or agency was responsible and/or whether cleanup actions had been initiated. An example of such a case was the Thermofluids site in Oregon. Some of these sites may have been cleaned up by facility owner/operators without formal oversight from a government cleanup program.

Regulatory Status

Another issue we were interested in assessing as part of this study was the number of damage cases that occurred at facilities that, at one time or another, were operating under RCRA Part B permits. RCRA permitted hazardous waste management facilities are subject to relatively stringent, facility-specific requirements, and in general are given more oversight by regulatory agencies than facilities without permits. For these reasons, these cases are of particular interest to the Agency with regard to this regulatory initiative, and we may need to subject them to

further, more in-depth examination. The following are some preliminary findings for these damage cases.

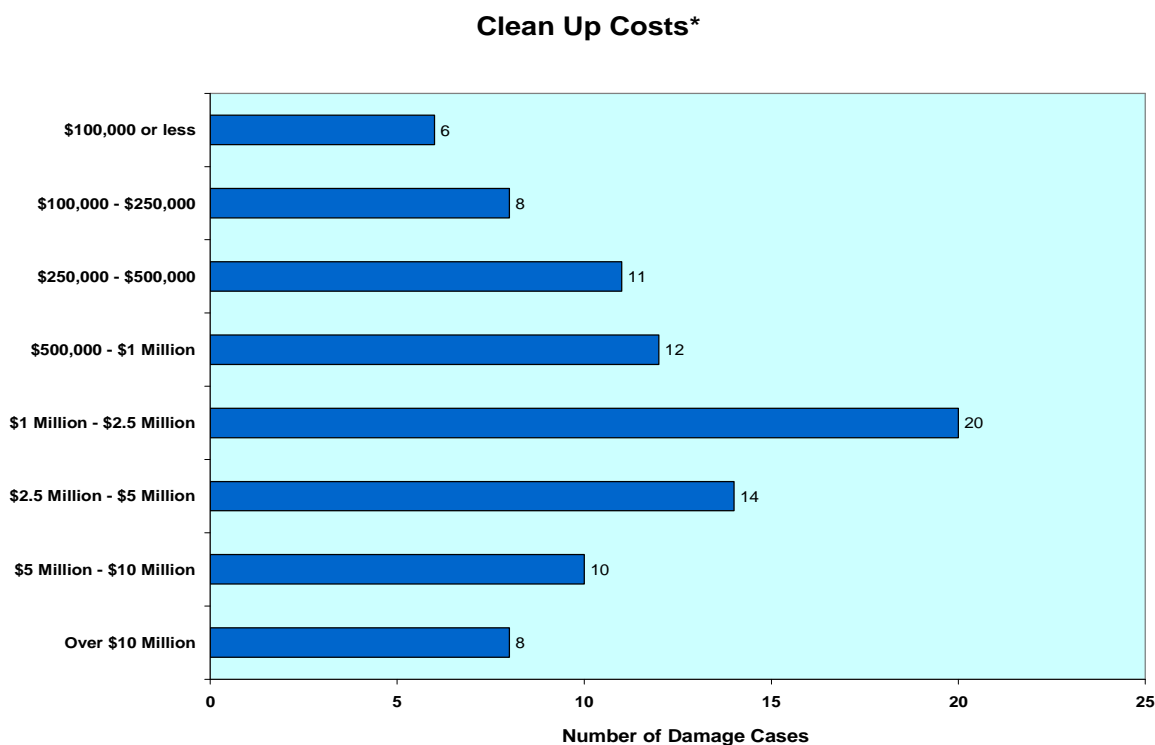
Twenty four of the damage cases studied were, at one time or another, operating under RCRA Part B permits. However, only nine clearly appear to have been operating under RCRA permits at the time the damage occurred. Two of these cases involved fires/explosions. At thirteen of the twenty four permitted facilities, all or part of the funds used to clean up environmental damages were contributed by the owner/operator of the facility, often under some form of consent agreement. In at least two cases, it appears that these funds became available by means of a RCRA-required financial assurance mechanism, such as a surety bond.

Thirteen of the facilities appear to have been cited for serious permit violations, either before or as a result of the damage incident. In four cases, the facility permits were revoked because of compliance issues. Eleven of the facilities were found to be no longer in business, because of bankruptcy or for other reasons.

One company - Safety Kleen - a large, commercial recycler primarily of solvents and other hazardous materials, was the owner/operator of five of the permitted facilities.

Cleanup Costs

For 89 of the damage cases, we were able to identify the costs, or at least cost estimates, associated with addressing the environmental problems caused by recycling activities. A breakdown of these costs is presented in Exhibit 7.

Exhibit 7: Clean Up Costs

*Cleanup costs may include costs for cleanup at the site not related specifically to damage from recycling operations.

It is entirely possible that these cost data are not a truly accurate representation of actual cleanup costs for the entire sample of 208 cases. For one thing, cost data were much easier to find for CERCLA-lead cleanups than cleanups done under other programs. Since CERCLA-lead cleanups are likely to be skewed toward addressing relatively large, high-priority, expensive contamination sites, the actual cleanup costs for all 208 cases are likely to be somewhat lower than these data suggest.

Another uncertainty with regard to these cost data is that in some cases, it was not possible to distinguish between cleanup costs that were incurred specifically to address recycling-related contamination, and costs for other cleanup activities at the site. The Metachem (also known as Standard Chlorine) site in Delaware, where total cleanup costs are expected to exceed \$75 million, is one example of such a site.

Additional Information

Further information is available in the attached appendices. Appendix 1 of this report is a summary table of the cases, and is organized alphabetically by State. Appendix 2 contains each of the 208 case descriptions, organized in the same way. Appendix 3 is a listing of the damage cases that were reviewed but were not investigated in detail, either because they did not fit within the scope of the study, or because there was insufficient information to make that determination.