

RETHINKING RECYCLING

BY

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Subtitle C of the Resource Conservation and Recovery Act (RCRA) establishes the so-called “cradle to grave” regulatory program over hazardous “solid wastes.” Although not obviously wastes, the United States Environmental Protection Agency (EPA) has consistently asserted jurisdiction to regulate some class of recyclable materials under Subtitle C. It has done this through a regulatory definition of “solid waste” that establishes a complex and confusing scheme that includes, excludes, and exempts recyclable materials from regulatory requirements in an almost incomprehensible fashion. In 2008, EPA added to this complexity by promulgating a new set of conditional exclusions that exempts certain reclaimed materials from classification as solid wastes.

This Article examines EPA’s current regulatory treatment of recyclable materials, including the 2008 reclamation exclusions. It suggests that the current approach fails on three levels. First, it is incoherent. EPA has not developed a consistent rationale for classifying materials as solid wastes. Second, EPA has developed a regulatory approach that is poorly drafted and confusing. Finally, EPA’s approach may unnecessarily include materials involved in legitimate recycling within the coverage of Subtitle C.

This Article suggests a different approach to regulating recyclable materials under Subtitle C. A key element is to resolve the conceptual confusion by asserting broad statutory authority over virtually all recyclable materials as solid wastes but fashioning a narrower regulatory definition based on an explicit balancing of RCRA’s competing objectives. This approach is supported by existing case law.

The Article suggests that the narrower regulatory definition include recycling activities that are equivalent to disposal, such as burning or land application, and all “sham” recycling activities. All other legitimate recycling would be excluded from regulation under the Subtitle C regulatory program. This approach would be supported by a series of mechanisms to provide both certainty and enforceability to a focus on sham recycling. The

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Article also suggests use of available reporting and liability provisions of RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to promote proper recycling. Taken together, this approach would provide a simpler and more coherent approach to the regulation of recyclable materials that encourages proper recycling of wastes without compromising the environmental objectives of RCRA.

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I. INTRODUCTION

The Resource Conservation and Recovery Act¹ (RCRA) establishes the so-called “cradle to grave” program for the management of hazardous waste.² Under Subtitle C of RCRA, hazardous “solid waste,” as defined by the United States Environmental Protection Agency (EPA), is subject to extensive controls on its storage, transportation, and disposal.³ When Tony Soprano’s waste management crew dumps hazardous stuff into a ditch in Jersey, they are likely violating the requirements of RCRA.

Although abandoned materials may clearly be solid wastes, there has been continuing controversy over the proper classification and regulation of recyclable materials under RCRA.⁴ Solid waste is defined under RCRA to include “discarded materials,”⁵ and recyclable materials that have a use in commerce are not, in any obvious sense, discarded. This has led to questions about the extent of EPA’s authority to define recyclables as solid waste under RCRA.⁶ Further, there are questions about the extent to which recyclable materials should be subject to RCRA control.⁷ Proper recycling of materials is, in most cases, preferable to disposal; indeed, recycling is an activity that RCRA seeks to encourage.⁸ On the other hand, recycling can be a sham exercise to avoid the cost of disposal and may involve activities that produce significant environmental harm. Regulation of recyclables under RCRA thus requires an assessment of the appropriate level of control that minimizes environmental risk without unduly burdening recycling activity.

EPA has consistently asserted jurisdiction to regulate some class of recyclable materials under the hazardous wastes provisions of RCRA Subtitle C.⁹ It has done this, however, through a multipage monstrosity of a regulatory definition that establishes a complex and confusing scheme that includes, excludes, and exempts recyclable materials from regulatory requirements in an almost incomprehensible fashion.¹⁰ EPA has, for many years, acknowledged problems in the way its regulations treat recycled materials under RCRA.¹¹

¹ Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901–6992(k) (2000) (amending Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 992 (1965)).

² See *infra* notes 16–29 and accompanying text for an overview of RCRA.

³ 42 U.S.C. §§ 6921–6939e (2000 & Supp. II 2002).

⁴ See *infra* Part III.

⁵ 42 U.S.C. § 6903(27) (2000).

⁶ See *infra* Part III.

⁷ See *id.*

⁸ See 42 U.S.C. § 6902(a)(6) (2000) (identifying an objective of RCRA as encouraging “properly conducted recycling and reuse”).

⁹ See *infra* notes 32–55 and accompanying text.

¹⁰ Almost incomprehensible, but not quite. Courts have upheld criminal convictions for violation of hazardous waste requirements notwithstanding arguments that the regulation is so confusing that it should be considered unconstitutionally void for vagueness. See, e.g., *United States v. White*, 766 F. Supp. 873, 882 (E.D. Wash. 1991). In support of its motion, the defendant quoted a statement of the former head of EPA’s RCRA program that “RCRA is a regulatory cuckoo land of definition. . . . I believe we have five people in the agency who understand what ‘hazardous waste’ is.” *Id.*

¹¹ See *infra* notes 128–37 and accompanying text for a discussion of EPA’s efforts to revise the definition of solid waste.

In 2008, EPA promulgated significant revisions to the definition of solid waste that substantially changes its treatment of certain types of recyclable materials.¹² This new rule, the culmination of years of assessment of EPA's treatment of recycling, has provided new and complex provisions that conditionally exclude many recycled materials from coverage under RCRA. The new provisions exclude "hazardous secondary materials" from classification as a solid waste if they are reclaimed "under the control" of the generator or, subject to significant conditions, they are reclaimed off-site by a third-party reclaimer.¹³ They also exclude materials exported for reclamation outside the United States.¹⁴

Although EPA's new attention to the problem of recycling under RCRA is welcome, EPA's new regulations deal with the problem in ways that perpetuate many of the existing flaws. Rather than reconsidering its basic approach, EPA has published new regulations that graft a complex set of provisions on the existing bloated and confusing set of regulations and policies that apply to recycled materials under RCRA.

This is unfortunate since EPA's existing approach to regulation of recyclable materials fails on many levels. First, it is incoherent. EPA has never developed a consistent rationale for classifying materials as solid wastes, and it has conflated the issues of what materials *may* be classified as solid wastes under RCRA with the issue of what recyclable materials *should* be regulated as hazardous wastes under Subtitle C. Second, EPA has developed a regulatory approach that is, quite simply, poorly drafted and confusing. This confusion creates problems in implementing the program and assuring public acceptance. Finally, EPA's approach may unnecessarily include materials involved in legitimate recycling within the coverage of Subtitle C.

This Article suggests a different approach to determining the scope of regulation of recyclable materials under Subtitle C. A key element is to resolve the conceptual confusion by establishing broad statutory authority to define virtually all recyclable materials as solid wastes but fashioning a narrower regulatory definition based on an explicit balancing of RCRA's competing objectives. The narrower regulatory definition would include recycling activities that are equivalent to disposal, such as burning or land application, and all "sham" recycling activities. All other legitimate recycling would be excluded from regulation under the Subtitle C regulatory program. This approach would be supported by a series of mechanisms to provide both certainty and enforceability to a focus on sham recycling. The Article also suggests reliance on available reporting and liability provisions of RCRA and CERCLA¹⁵ (the Comprehensive Environmental Response, Compensation, and Liability Act of 1980) that do not require classification of recyclable materials as hazardous waste under Subtitle C. Taken together, this approach would provide a simpler and more coherent approach to the

¹² See Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668 (Oct. 30, 2008) (to be codified at 40 C.F.R. § 260-61, 270). See *infra* notes 128-219 for a discussion of the new rules.

¹³ 73 Fed. Reg. at 64,669-70, 64,757, 64,760-61 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii), 261.4(a)(23)-(24)).

¹⁴ *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(25)).

¹⁵ Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675 (2000).

regulation of recyclable materials that encourages proper recycling of wastes without compromising the environmental objectives of RCRA.

This Article begins in Parts II and III with a brief introduction to RCRA and a discussion of the problems confronting the regulation of recyclable materials under RCRA. Parts IV and V contain a description of EPA's current approach to regulating recyclable materials, including a description of EPA's 2008 regulatory exclusions for certain recycled materials. Section VI discusses fundamental problems with EPA's regulatory program approach. Part VII contains a modest proposal for an alternative regulatory approach.

II. A RCRA PRIMER

It may be useful to describe some of the basic elements of the statute for the RCRA novice. Subtitle C of RCRA establishes a "cradle to grave" regulatory program that applies to materials defined as hazardous solid wastes under EPA regulations.¹⁶ We will consider EPA's regulatory definition of solid waste in detail below, but for now it is enough to know that EPA defines solid waste to include abandoned material (such as stuff that is obviously thrown away) and many types of recyclable materials.¹⁷ In most cases, EPA does not classify the products produced from recyclable wastes as wastes.¹⁸

A solid waste is a hazardous waste if it is either designated on EPA lists of hazardous wastes, so-called "listed wastes," or it exhibits any of four hazard characteristics, so-called "characteristic wastes."¹⁹ To determine if a waste is a listed waste, one need only check the EPA regulations; to determine if a waste is a characteristic waste, it is necessary to make a case-by-case determination that may involve laboratory testing to determine if a waste exhibits a hazard characteristic.²⁰ Mixtures of hazardous and nonhazardous wastes and wastes derived from the

¹⁶ See Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6921–6939e (2000 & Supp. II 2002).

¹⁷ 40 C.F.R. § 261.2 (2008). See *infra* notes 74–114 and accompanying text (discussing EPA's regulatory definition of solid waste).

¹⁸ See 40 C.F.R. § 261.3(c)(2)(i) (2008) (stating that "materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes"). See also *infra* note 120 and accompanying text (discussing EPA's classification of products produced from recyclable wastes).

¹⁹ See 40 C.F.R. § 261.3(a) (2008) (providing that a solid waste is a hazardous waste if "[i]t is not excluded from regulation as a hazardous waste under § 261.4(b)," and it meets any of the listed criteria). EPA has three lists of hazardous waste including wastes from specific sources (such as wastewater treatment sludges from petroleum refineries), wastes from nonspecific sources (such as any of certain halogenated spent solvents), and certain off-specification commercial chemical products. See *id.* §§ 261.31–33 (listing hazardous wastes from nonspecific sources, specific sources, and off-specification species, respectively). The four hazard characteristics are ignitability, reactivity, corrosivity, and toxicity. EPA specifies methodologies for determining whether a material exhibits a characteristic. See *id.* §§ 261.20–24 (defining each hazardous waste characteristic).

²⁰ Generators are not required to test their waste to determine if they exhibit a hazard characteristic. The generator may make a determination based on its understanding of the constituents of a waste—so-called "knowledge of process." See *id.* § 262.11(c)(2) (providing that the generator may determine whether the waste is hazardous by "[a]pplying knowledge of the hazard characteristic of the waste in light of the materials or the processes used").

treatment of hazardous wastes may also be classified as hazardous under EPA's mixture and derived-from rules.²¹

Materials classified as hazardous wastes under the regulations are subject to a series of complex and costly regulatory requirements on the generator, transporter and disposer of the waste. There are several key elements of this regulatory program, including:

- a requirement that the initial generator determine if a material is a hazardous waste,²²
- limitations on the duration and method of on-site storage of the hazardous waste by the generator,²³
- substantial restrictions on the disposal of hazardous wastes in landfills,²⁴
- use of a federally mandated hazardous waste "manifest" when wastes are transported,²⁵ and
- a requirement that hazardous wastes be disposed of only at a facility, known in the trade as a "treatment, storage, or disposal facility" or "TSDF," that has a federally mandated RCRA permit.²⁶

The basic structure of the Subtitle C program is designed to ensure that hazardous waste, tracked and managed from its point of generation, actually ends up in a permitted disposal facility.

In addition to the Subtitle C regulatory program, RCRA also has a number of other elements that apply to nonhazardous wastes. Subtitle D, for example,

²¹ See JEFFREY M. GABA & DONALD W. STEVER, *THE LAW OF SOLID WASTE, POLLUTION PREVENTION AND RECYCLING* § 2:47-:66 (perm. ed., update 2008) (discussing the mixture and derived-from rules). The mixture rule applies to the mixture of hazardous and nonhazardous solid wastes; if a listed hazardous waste is mixed with a nonhazardous waste, the resulting mixture is hazardous. 40 C.F.R. § 261.3(a)(2)(iv) (2008). If a characteristic hazardous waste is mixed with a nonhazardous waste, the resulting mixture is hazardous only if the mixture itself exhibits a hazard characteristic. See *id.* § 261.3(a)(2)(i) (providing that such a mixture "is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the nonexcluded wastes prior to mixture"). The derived-from rule applies to wastes, such as sludges, that are derived from the treatment of hazardous wastes. In general, wastes derived from treatment of a listed hazardous waste are themselves hazardous wastes. See *id.* § 261.3(c)(2)(i) (providing that solid wastes "generated from" treatment of a hazardous waste are themselves hazardous wastes). Wastes derived from treatment of a characteristic hazardous waste are hazardous if they exhibit a characteristic. See GABA & STEVER, *supra*, at § 2:59 (describing exemption under 40 C.F.R. § 261.3(c) for derived-from wastes that do not exhibit a characteristic).

²² See 40 C.F.R. § 262.11 (2008) (providing the steps for a generator to follow in determining whether a waste is hazardous).

²³ *Id.* § 262.34. The "accumulation time" provisions allow large quantity generators to store hazardous wastes on-site for up to 90 days without triggering a requirement for a permit. See *id.* § 262.34(a).

²⁴ See 40 C.F.R. §§ 268.1-50 (2007) (imposing land disposal restrictions which apply a number of limitations on the land disposal of hazardous and, in some cases, nonhazardous solid wastes).

²⁵ See 40 C.F.R. §§ 262.20-27 (2008) (detailing the requirements and parts of the manifest).

²⁶ See Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6922(a)(5) (2000).

addresses disposal of nonhazardous wastes.²⁷ Its most important component establishes requirements for the construction and operation of municipal solid waste landfills.²⁸ RCRA also has provisions that allow the government and private parties to seek injunctive relief if generators, transporters, or disposers of “solid or hazardous waste” have contributed to an “imminent and substantial endangerment.”²⁹

III. THE PROBLEM OF RECYCLING UNDER RCRA

The Subtitle C regulatory program makes obvious sense when applied to hazardous materials that are dumped or obviously discarded. The structure and objectives of RCRA and the complexity of the market itself however, create significant problems in determining the application of the program to materials that are intended for recycling.

A. Statutory Jurisdiction over Recyclable Materials

Recyclable materials are only subject to regulation under RCRA if they constitute a “solid waste” within the meaning of the statute. RCRA 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, and from community activities”³⁰ The crucial term in this definition is “discarded material,” but since recyclable materials are intended for some continuing use in commerce, they are not in an obvious sense discarded. Since EPA’s earliest efforts to define “solid waste” under RCRA, parties have claimed that EPA does not have authority to classify recyclable materials as wastes.³¹

²⁷ See *id.* §§ 6941–6949a.

²⁸ *Id.* § 6944; see also 40 C.F.R. §§ 258.1–.75 (2008) (establishing criteria for municipal solid waste landfills).

²⁹ 42 U.S.C. § 6972(a)(1)(B) (2000) (provision for citizen suit addressing imminent and substantial endangerment); *id.* § 6973(a) (authorizing the Administrator to bring suit on behalf of the government to seek relief from imminent and substantial endangerment); see *infra* notes 318–24 and accompanying text (applying aforementioned provisions to a broader class of solid wastes than covered by EPA’s regulatory definition).

³⁰ 42 U.S.C. § 6903(27) (2000) (emphasis added). Welcome to the wacky world of RCRA, where solid means liquid.

³¹ See Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Standards for the Management of Specific Wastes and Management Standards for Specific Types of Facilities, 48 Fed. Reg. 14,472, app. A, at 14,502 (proposed Apr. 4, 1983) (to be codified at 40 C.F.R. pts. 260–61, 264–66) (noting that “[m]any commenters to the Agency’s May 19, 1980 regulations argued that recycled materials cannot be wastes under RCRA, basing their claim largely on the phrase ‘other discarded material’ in the statutory definition”).

EPA has, however, consistently asserted jurisdiction over some class of recyclable materials under RCRA.³² EPA has advanced a number of arguments in support of its claimed jurisdiction over recycled materials. In a 2007 proposal to amend the definition of solid waste, EPA restated its basic justifications for classifying some recyclable materials as solid wastes.³³ First, EPA argues that both the express provisions of RCRA and its legislative history indicate Congress's intent to include recyclable materials under RCRA regulatory authority.³⁴ Second, EPA claims that hazardous materials stored and transported prior to recycling have the same potential for causing environmental harm as hazardous materials intended for disposal and refers to numerous examples of environmental harms caused by recycling facilities including cases cited by Congress to justify adoption of RCRA.³⁵ Finally, EPA argues that exempting recycling activities would result in identical materials moving in and out of the RCRA regulatory program depending on their intended use or disposition.³⁶ This, in EPA's view, is inconsistent with an intention to manage hazardous wastes from "cradle to grave."³⁷

Although EPA's general assertion of jurisdiction over recyclable materials seems clearly correct, the arguments it has put forward are surprisingly weak. The legislative history cited by EPA is at best equivocal.³⁸ Further, EPA's claim that recyclable materials pose the same environmental harms as materials that are

³² In an appendix to its original 1983 proposed definition of solid waste, EPA presented an extended analysis of its claim that RCRA provided authority to regulate some forms of recycling. *Id.* In the preamble to the final 1985 regulation, EPA restated this position. Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 616 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66). In 1996, as part of a proposal to exclude certain reclaimed mining waste from classification as solid waste, EPA stated its views on its legal authority to regulate recycled materials as solid waste. *See* Land Disposal Restrictions—Supplemental Proposal to Phase IV: Clarification of Bevill Exclusion for Mining Wastes, Changes to the Definition of Solid Waste for Mineral Processing Wastes, Treatment Standards for Characteristic Mineral Processing Wastes, and Associated Issues, 61 Fed. Reg. 2338, 2341–42 (proposed Jan. 25, 1996) (to be codified at 40 C.F.R. pts. 148, 261, 268, 271). In the preamble to its 2002 regulations establishing requirements for fertilizers produced from hazardous wastes, EPA also discusses the basis for its claim for jurisdiction over hazardous secondary materials that are recycled. *See* Regulation of Hazardous Oil-Bearing Materials From the Petroleum Refining Industry and Other Hazardous Secondary Materials Processed in a Gasification System To Produce Synthesis Gas, 67 Fed. Reg. 13,684, 13,685 (proposed Mar. 25, 2002) (to be codified at 40 C.F.R. pts. 260–61). EPA also provided a discussion of this issue in a 2003 proposed amendment to the definition of solid waste and in the 2007 supplemental proposal. *See* Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558, 61,561–63 (proposed Oct. 28, 2003) (to be codified at 40 C.F.R. pts. 260–61); Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172, 14,176 (proposed Mar. 26, 2007) (to be codified at 40 C.F.R. § 260–61).

³³ *See* 72 Fed. Reg. at 14,176. In the preamble to its 2008 final regulation, EPA referred to its earlier analysis in discussing its general authority to regulate recyclable materials as solid wastes. *See* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,720 (Oct. 30, 2008).

³⁴ 72 Fed. Reg. at 14,176.

³⁵ *Id.*

³⁶ *Id.* at 14,175.

³⁷ *Id.*

³⁸ Portions of the House report supporting RCRA make reference to resource recovery, which presumably is a form of recycling wastes or discarded materials. *See* H.R. REP. NO. 94-1491, pt. 2, at 90 (1976). That same House report, however, also states that "[m]uch industrial and agricultural waste is reclaimed or put to new use and is therefore not a part of the discarded materials disposal problem the committee addresses." *Id.* pt. 1, at 2.

disposed of proves little. The environmental harms from recyclable materials are also similar to the environmental harms from the transportation and storage of virgin materials used in commerce, but there is no question that RCRA does not apply to virgin materials. Finally, the problems from defining a material as a solid waste based on the intent of the actor are real, but even under EPA's regulations, a material from an industrial process that is directly used as a substitute for another commercial product is not a waste while the same material, if disposed of, is a waste.³⁹ In other words, complexity of application does not *require* coverage of recyclable materials as a waste. Subtitle C may apply cradle to grave, but that does not require us to bury the living.

Nonetheless, there seems little doubt that the statutory definition of solid waste may include at least some class of recyclable materials. The strongest of EPA's arguments is grounded in the statutory language of RCRA. EPA has claimed that the "most pertinent" statutory provision is the definition of "hazardous waste management."⁴⁰ Under RCRA this is defined to include the "collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste,"⁴¹ and EPA concludes that "the recycling activities of recovery, source separation (the selection of recyclable from nonrecyclable items), and collection thus can involve hazardous waste."⁴² Other provisions of RCRA, including definitions relating to "resource recovery," also indicate that recyclable materials may be subject to regulation as solid wastes under RCRA.⁴³ These provisions indicate that a hazardous material may be classified as a solid waste even if subsequently recycled.

Existing case law supports the general conclusion that recyclable materials may be defined as "discarded material."⁴⁴ In *American Mining Congress v. EPA*,

³⁹ 72 Fed. Reg. at 14,175.

⁴⁰ Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Standards for the Management of Specific Wastes and Management Standards for Specific Types of Facilities, 48 Fed. Reg. 14,472, app. A, at 14,502 (proposed Apr. 4, 1983) (to be codified at 40 C.F.R. pts. 260–61, 264–66). In *American Mining Congress v. EPA (AMC I)*, 824 F.2d 1177 (D.C. Cir. 1987), the first case to evaluate EPA's regulatory definition of solid waste, the Court of Appeals for the District of Columbia largely dismissed this argument as circular: EPA relied on provisions that apply to hazardous wastes to define the scope of hazardous wastes. *Id.* at 1187. But while these provisions do not help in identifying the point at which a material first becomes a waste, they do support the more fundamental point—a material that is recycled *may* be classified as a waste. In other words, they refute the contention that a material can never be considered "discarded" because it is subsequently recycled.

⁴¹ Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6903(7) (2000).

⁴² 48 Fed. Reg. app. A, at 14,502.

⁴³ See 42 U.S.C. §§ 6901(c)(2)–(3), 6902(a)(1), 6902(a)(6), 6902(a)(8)–(11), 6913, 6942 (c)(10), 6943(a)(5)–(6), 6948(a)(2)(A), 6948(d)(1), 6951, 6952, 6962(c), 6962(d)(1), 6962(e) (2000).

⁴⁴ EPA routinely cites to *United States Brewers Ass'n v. EPA*, 600 F.2d 974 (D.C. Cir. 1979), to support the position that solid wastes may include recyclable materials. See, e.g., Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,720 (Oct. 30, 2008) (discussion of EPA authority to regulate hazardous waste recycling in preamble to 2008 rule). The case involved a challenge to EPA solid waste management guidelines for beverage containers, including certain federal procurement requirements relating to returnable bottles. Indeed the petitioner argued, among other things, that the guidelines exceeded EPA's statutory authority because "the beverage containers are not 'solid waste'

(*AMC I*),⁴⁵ the court rejected EPA's authority to classify certain in-process materials as wastes, but indicated that recycled materials, if no longer part of a continuous process within the generating industry, can be classified as discarded wastes.⁴⁶ A series of subsequent decisions of the D.C. Circuit have also indicated that recyclable materials are potentially subject to regulation as waste.⁴⁷ In *Safe Food & Fertilizer v. EPA*,⁴⁸ the D.C. Circuit characterized its earlier decisions as holding that "materials destined for future recycling by another industry *may* be considered 'discarded'; the statutory definition does not preclude application of RCRA to such materials if they can reasonably be considered part of the waste disposal problem."⁴⁹

Other courts have also expansively read EPA's authority to regulate recyclable materials as a solid waste. In *United States v. Ilco*,⁵⁰ for example, the court held that spent batteries subject to recycling by reclaiming their lead components could be considered discarded and therefore classified as solid wastes

until discarded and hence regulations applying to the distribution of beverages before the containers are disposed of are not authorized." *United States Brewers*, 600 F.2d at 981. The court rejected this argument because EPA was required to publish guidelines for "solid waste management" defined by the statute to include "planning or management respecting resource recovery and resource conservation," 42 U.S.C. § 6903(30) (2000), "reduction of the amounts of solid waste that are generated" and "utilization of recovered resources." *Id.* § 6903(21). In the court's view, "the Beverage Container Guidelines clearly are designed to achieve these ends." *United States Brewers*, 600 F.2d at 983.

It would be a mistake to read too much into this opinion regarding the scope of EPA's authority to regulate recyclable materials. First, the case involved repromulgation of procurement guidelines adopted under statutory authority existing prior to RCRA. More significantly, as the D.C. Circuit pointed out in *AMC I*, under its solid waste management guidelines:

EPA had merely acted to ensure its ability to regulate the containers once they were actually discarded, or thrown away, by the consumer pursuant to its authority to plan and manage resource recovery and resource conservation. 42 U.S.C. § 6903(30) (1982) (defining "solid waste management"). The court did not discuss the definition of "solid waste" under § 6903(27). Nor did the court find that undiscarded materials fell within the definition of discarded materials, as EPA suggests.

AMC I, 824 F.2d at 1193 n.25. Certainly, EPA would not rely on *United States Brewers* to justify regulation of bottles as solid waste *prior* to the point of their original discard. Once no longer used, however, case law establishes EPA's authority to classify the containers as a solid waste even though intended for subsequent recycling. See *infra* notes 263–81 and accompanying text.

⁴⁵ 824 F.2d 1177 (D.C. Cir. 1987).

⁴⁶ See *id.* at 1187 n.14 (noting that regulation of discarded used oil collection by oil recyclers is "consistent with an everyday reading of the term 'discarded'").

⁴⁷ In *American Petroleum Institute v. EPA*, 906 F.2d 729, 741 (D.C. Cir. 1990), and *American Mining Congress v. EPA (AMC II)*, 907 F.2d 1179, 1186 (D.C. Cir. 1990), the court held that materials that had "an element of discard" and that had become "part of the waste disposal problem" could be treated as wastes. In *Shell Oil Co. v. EPA*, 950 F.2d 741, 757 (D.C. Cir. 1991), the court upheld EPA's authority to classify "resource recovery" as a form of treatment subject to regulation under Subtitle C. In *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047, 1054 (D.C. Cir. 2000), the D.C. Circuit reaffirmed the limits on EPA's jurisdiction over materials that were recycled in a continuous process within the generating industry itself, but did not otherwise limit EPA's jurisdiction over recyclable materials. See *infra* notes 264–79 and accompanying text for a discussion of these cases.

⁴⁸ 350 F.3d 1263 (D.C. Cir. 2003).

⁴⁹ *Id.* at 1268.

⁵⁰ 996 F.2d 1126 (11th Cir. 1993).

under RCRA.⁵¹ The court stated that “[p]reviously discarded solid waste, although it may at some point be recycled, nonetheless remains solid waste.”⁵² Similarly, in *Owen Electric Steel Co. v. Browner*,⁵³ the court held that metal slag was a “solid waste” even though subsequently recycled.⁵⁴

Thus, there seems no doubt that some class of recyclable materials *may* be considered discarded solid wastes under RCRA. The significant jurisdictional issues, discussed below, involve two distinct questions. First, at what point do recyclable materials first become subject to RCRA regulation as solid wastes? Second, on what basis may EPA exclude recyclable solid wastes from regulation as hazardous wastes under the Subtitle C program?⁵⁵

B. No Clear Economic Indicia of Waste

On first glance, one might assume that the classification of a material as a waste can be clearly resolved by the marketplace: products have value, wastes do not. In other words, if someone is willing to pay for a material it cannot be a waste. This view was rather neatly summed up by the Supreme Court of California in *Waste Management of the Desert v. Palm Springs Recycling Center*.⁵⁶ The court rejected a county’s attempt to establish an exclusive franchise to collect recyclable materials under its authority to regulate solid waste management services. The court concluded that a material with “economic value” is not a waste, stating: “If the owner sells his property—that is, receives value for it—the property cannot be said to be worthless or useless in an economic sense and is thus not waste from the owner’s perspective.”⁵⁷

The court further noted: “Property that is sold for value—for example, a recyclable—is not ‘discarded’ under any traditional understanding of the term. ‘Discard’ means ‘to throw away.’ It is not synonymous with the broader term ‘dispose,’ which means ‘To transfer or part with, as by giving or selling.’”⁵⁸ The idea of relying on economic value to define the concept of waste is simple, seductive, but flawed. The problems are both practical and conceptual.⁵⁹

If “economic value” means that one party is willing to pay money for the material, there is one practical objection to the criterion. In complex economic transactions, it is possible to disguise the direction in which money flows. If

⁵¹ *Id.* at 1131.

⁵² *Id.* at 1132.

⁵³ 37 F.3d 146 (4th Cir. 1994).

⁵⁴ *Id.* at 150.

⁵⁵ See *infra* notes 263–85 and accompanying text.

⁵⁶ 869 P.2d 440, 443 (Cal. 1994).

⁵⁷ *Id.*

⁵⁸ *Id.* (citations omitted).

⁵⁹ EPA has considered, and rejected, the use of some form of economic value test to define wastes. Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Standards for the Management of Specific Wastes and Management Standards for Specific Types of Facilities, 48 Fed. Reg. 14,472, 14,478–81 (proposed Apr. 4, 1983) (to be codified at 40 C.F.R. pts 260–61, 264–66).

company A can avoid the costs associated with disposal of a hazardous waste, it is all too credible that some arrangement can be made with Disposer B in which B pays a peppercorn for the materials but is otherwise compensated through other aspects of the transaction. Such sham transactions might be detectable, but it hardly makes for an effective system if determining whether a material is a hazardous waste is based not on toxicity testing but on an audit of the books. In other words, there are significant practical problems in relying on a test of economic value.

There are, however, more fundamental conceptual problems with relying on a test of economic value to define the class of hazardous wastes. If the “costs” of both virgin materials and recyclable materials reflected the full social costs from their use, if the externalities associated with their use were fully reflected in the price, then the respective price of the items might reflect their true economic value. But a paradox exists when comparing the value of hazardous waste with the value of a product. The “value” of regulated hazardous wastes reflects the increased costs associated with the controls necessary to minimize environmental harms. Unregulated hazardous products, in contrast, do not reflect in their market price the costs of the environmental harms they might produce. In other words, the market subsidizes nonregulated materials. Thus, it may be conceptually improper to assess “market value” in determining whether a material should be classified as a waste.

Certainly the direction of the flow of money between generator and recycler simply does not capture the issue of economic value. Willingness to pay for a material does not, in and of itself, establish that the material is not a waste. Consider a situation in which a business buys virgin fuel oil at \$5 a gallon for use in its boilers. That business would, presumably, be willing to pay up to \$5 a gallon for used oil contaminated with metals and dioxins if the used oil can serve as a substitute for the virgin oil. In other words, an environmentally harmful “waste” might fetch a positive economic price in the market place even if its use produces environmental harms greater than use of an alternative virgin material. As an unregulated product, those environmental harms need not be reflected in the price.

Nor does willingness to accept money for receipt of a material mean that it is a waste. A company faced with a \$50 per gallon fee for disposal of hazardous waste may be willing to pay something less than \$50 per gallon to a company that can use the waste as a legitimate substitute for a commercial product. The value in this case comes from avoiding the cost of regulatory control.⁶⁰ Thus, in an imperfect marketplace, cost simply is not a surrogate for economic value.

⁶⁰ In developing its 2008 regulation, EPA undertook a study of market forces affecting recycling of hazardous materials. OFFICE OF SOLID WASTE, EPA, A STUDY OF POTENTIAL MARKET FORCES ON THE MANAGEMENT OF HAZARDOUS SECONDARY MATERIALS INTENDED FOR RECYCLING (2006), *available at* <http://www.epa.gov/epawaste/hazard/dsw/rulemaking.htm> [hereinafter MARKET FORCES STUDY] (EPA-HQ-RCRA-2002-0031-0358). Describing the results of the study, EPA noted that:

Different economic incentives between the recycling of hazardous secondary materials and manufacturing can arise due to differences in these two business models. As opposed to manufacturing, where the cost of inputs of either raw materials or intermediates is greater than zero and revenue is generated primarily from the sale of the output, some models of hazardous secondary materials recycling involve generating revenue primarily from the receipt of the hazardous secondary materials. Recyclers of hazardous secondary materials in this situation may thus respond differently to economic forces and incentives from traditional manufacturers.

C. No Clear Environmental Indicia of Wastes

A particular problem in determining the applicable regulatory authority over recyclable materials is the questionable role that environmental harm should play. Certainly, an objective of RCRA is to prevent harm to human health and the environment from improper waste management practices.⁶¹ Further, the legislative history of RCRA contains references to environmental problems at recycling facilities,⁶² and EPA has regularly relied on concerns about the potential environmental risks of recycling to justify classification of materials as a solid waste.⁶³

Nonetheless, it is unclear how the potential for environmental harm is relevant in determining the jurisdictional scope of solid wastes. Environmental harms can also result from the use and management of obviously virgin materials, and there is no doubt that virgin materials, regardless of their environmental problems, cannot be regulated as wastes under RCRA. Therefore, the fact that use of a material creates environmental harm cannot serve as a basis for determining whether that material is a waste or a product. Indeed, one objective of a rational regulatory scheme for recyclable materials is to explain the significance, if any, of potential environmental harm in defining the scope of regulatory authority under RCRA.

D. The Complexity of Industrial Recycling Activity

Determining the proper regulatory scheme for recyclable materials is further complicated by the extraordinary diversity of recycling practices. Activities that might be viewed as recycling are conducted within a particular facility itself (intrafacility recycling), through transactions that involve transfer of materials between facilities owned by the same company (intracompany recycling), and through transactions involving transfer of wastes to third-party recyclers (third-party recycling). The economic and industrial rationale for these recycling activities can vary widely.⁶⁴

Equally important, there are variations in the technical competence and financial strength of the various parties. Potential liability for cleanup of any hazardous materials released during the recycling process may constitute a significant inducement for proper management practices by financially solid companies.⁶⁵ Undercapitalized, marginal recycling companies might not be influenced by the potential for financial liability that they cannot satisfy. In other words, those companies might accept the risk of bankruptcy rather than engage in more expensive, but environmentally sound, recycling practices.

Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,724 (Oct. 30, 2008).

⁶¹ See, e.g., Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6902(a)(4) (2000) (stating that an objective of RCRA is to assure that “hazardous waste management practices are conducted in a manner which protects human health and the environment”).

⁶² See H.R. REP. NO. 94-1491, at 17–18 (1976).

⁶³ See *infra* note 227 and accompanying text.

⁶⁴ See, e.g., MARKET FORCES STUDY, *supra* note 60, at 3.

⁶⁵ See *infra* notes 314–15 and accompanying text.

E. Competing Objectives of RCRA

A final problem in addressing recycling under Subtitle C is found in the potentially competing objectives of RCRA itself. On the one hand, the purpose of RCRA is to establish controls on the environmentally destructive consequences arising from the mismanagement of hazardous wastes. Thus, Congress stated that an objective of RCRA is to ensure that “hazardous waste management practices are conducted in a manner which protects human health and the environment.”⁶⁶ On the other hand, RCRA also contains an express objective of “encouraging process substitution, materials recovery, properly conducted recycling and reuse, and treatment.”⁶⁷ EPA itself has published a Pollution Prevention Policy Statement that indicates an intention to promote recycling in preference to disposal of wastes.⁶⁸

Regulation of recyclable materials as hazardous waste under Subtitle C creates an obvious conflict. The more closely that EPA regulates the management of recyclable materials through manifests, permitting, and reporting requirements, the less likely (one hopes) that the materials will cause environmental harm. On the other hand, the more closely recyclable materials are regulated, the greater the cost of recycling. This presumably has the perverse effect of reducing incentives to recycle. These costs arise not simply from the imposition of proper management controls by generators and recyclers, a cost that is more likely to be appropriately imposed to avoid mismanagement of recyclable materials, but also the transaction costs that arise from participation in the Subtitle C program.

Additionally, regulation of recyclable materials as a hazardous waste creates another potential disincentive to recycling. Industry has consistently argued that classification of materials as a hazardous waste creates a “stigma.”⁶⁹ The mere fact of labeling a material as a hazardous waste discourages companies from recycling the material. EPA has taken the issue of stigma seriously enough to develop a variety of techniques to avoid the public labeling of regulated materials as hazardous waste. In an almost totally ignored regulation, EPA states that

⁶⁶ 42 U.S.C. § 6902(a)(4) (2000).

⁶⁷ *Id.* § 6902(a)(6). In 1990, Congress also adopted the Pollution Prevention Act which states:

The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

Pollution Prevention Act of 1990, 42 U.S.C. § 13,101(b) (2000).

As discussed below, Congress in 1999 adopted the Superfund Recycling Equity Act to limit CERCLA liability for generators of certain recyclable materials. *See infra* notes 304–06 and accompanying text.

⁶⁸ *See* Pollution Prevention Policy Statement, 54 Fed. Reg. 3845, 3845 (Jan. 26, 1989).

⁶⁹ *See, e.g.*, Standards for the Management of Cement Kiln Dust, 64 Fed. Reg. 45,632, 45,635 (proposed Aug. 20, 1999) (to be codified at 40 C.F.R. pts. 259, 261, 266, 270) (noting industry comments on the stigmatizing effect of classification of a material as a hazardous waste.) *See* Jeffrey Gaba, *Regulation by Bootstrap: Contingent Management of Hazardous Wastes under the Resource Conservation and Recovery Act*, 18 YALE J. ON REG. 85, 114 (2001) (discussing concern that “stigma” of classifying materials as hazardous wastes under RCRA will discourage recycling).

“hazardous wastes that are recycled will be known as ‘recyclable materials.’”⁷⁰ A waste by any other name may still stink, but classification may have consequences.

Possible conflicting objectives thus require something of a balancing act. Regulation of recyclable materials requires sensitivity both to environmental protection and the economic consequences of regulation.

IV. EPA’S CURRENT TREATMENT OF RECYCLABLE MATERIALS

With problems as prelude, it is time to wade into the morass of EPA’s current regulatory treatment of recyclable materials and recycling under RCRA. This involves an examination of EPA’s assertion of jurisdiction over recyclables through its definitions of solid waste and the regulatory requirements that EPA imposes on recyclable materials and recycling.

A. The “Dual” Definitions

In determining the scope of EPA’s authority over recyclable materials, it is important to note that EPA applies at least two different definitions of solid waste in exercising its authorities under RCRA.⁷¹ EPA has, as discussed below, promulgated a complex definition of solid waste that defines the scope of its Subtitle C regulatory program.⁷² Only solid wastes that fall within the regulatory definition are subject to the detailed requirements applicable to generators, transporters, and disposers of hazardous waste under Subtitle C.

EPA states, however, that for purposes of exercising its authority under the “imminent and substantial endangerment” provisions of section 7003 and the recordkeeping, reporting, and inspections authorities of sections 3007 and 3013, EPA will apply the presumably broader statutory definition of solid waste.⁷³ EPA has not promulgated any regulation defining the scope of the statutory definition of

⁷⁰ 40 C.F.R. § 261.6(a)(1) (2008).

⁷¹ Although at one time there may have been only two definitions, the distinction between the “regulatory” and “statutory” definitions of solid waste has become more complex. In its military munitions rule, EPA has purported to establish regulatory conditions that define when a material meets the “statutory” definition of solid waste and is therefore subject to actions under sections 7002 and 7003 of RCRA. *See id.* § 266.202(d). This approach was upheld in *Military Toxics Project v. EPA*, 146 F.3d 948, 955 (D.C. Cir. 1998). This suggests that EPA can use case-by-case regulatory provisions to establish the applicability of the statutory definition. Thus, the “dual” system of a regulatory definition for purposes of Subtitle C and the statutory definition for purposes of sections 7002 and 7003 of RCRA may no longer be in existence.

⁷² 40 C.F.R. § 261.2 (2008); Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,760 (Oct. 30, 2008). *See infra* notes 74–113 and accompanying text.

⁷³ 40 C.F.R. § 261.1(b)(2) (2008). EPA also claims authority to apply the statutory definition of “hazardous waste” in applying its corrective action authority under section 3004(u) of RCRA. *See* Corrective Action for Solid Waste Management Units (SWMUs) at Hazardous Waste Management Facilities, 55 Fed. Reg. 30,798, 30,809 (proposed July 27, 1990) (to be codified at 40 C.F.R. pts. 264–65, 270–71). Courts have also recognized that the broader statutory definition also applies to “imminent and substantial endangerment” actions brought under the citizen suit provisions of section 7002. *See* Conn. Coastal Fishermen’s Ass’n v. Remington Arms Co., 989 F.2d 1305, 1316 (2d Cir. 1993); *Comite Pro Rescate de la Salud v. Puerto Rico Aqueduct and Sewer Authority*, 888 F.2d 180, 187 (1st Cir. 1989).

solid waste for these purposes, and courts and EPA must look to the statute itself to define the applicable scope of these provisions.

B. EPA's Subtitle C Regulatory Definition of Solid Waste

Although RCRA was adopted in 1976, EPA did not promulgate its first regulatory definition of “solid waste” until May 1980.⁷⁴ This first interim definition contained an extremely broad assertion of jurisdiction over recycled materials. It defined “solid waste” to include a material that is “a manufacturing or mining by-product and sometimes is discarded.”⁷⁵ In effect, the definitions provided that recyclable materials, if treated as discarded materials by anyone, were classified as solid waste for all. On the other hand, EPA imposed only limited regulatory requirements on these materials.⁷⁶

This definition was the subject of judicial challenge, and on April 4, 1983, EPA proposed revisions to the initial definition that defined a material as a solid waste based on the nature of the material and the manner of its disposal.⁷⁷ On January 4, 1985, EPA promulgated what is, with some revisions, its current final regulation.⁷⁸ The regulations now establish a complex scheme in which a material is defined as a “solid waste” if, consistent with the statutory definition, it is a “discarded material.”⁷⁹ The regulation defines discarded material to include “any material” that has been 1) abandoned, 2) recycled, 3) recycled and designated as “inherently waste-like,” or 4) defined as a military munition.⁸⁰

⁷⁴ Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33,084, 33,119 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261). See MARC K. LANDY, MARC J. ROBERTS & STEPHEN R. THOMAS, *THE ENVIRONMENTAL PROTECTION AGENCY: ASKING THE WRONG QUESTIONS: FROM NIXON TO CLINTON* 89–132 (expanded ed. 1994) for an inside look at the development of the RCRA regulations in the Carter and Reagan Administrations.

⁷⁵ The 1980 regulation defined solid waste to include “other waste material” which: “(1) Is discarded or is being accumulated, stored or physically, chemically or biologically treated prior to being discarded; or (2) Has served its original intended use and sometimes is discarded; or (3) Is a manufacturing or mining by-product and sometimes is discarded.” 40 C.F.R. § 261.2(b) (1980).

⁷⁶ Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Standards for the Management of Specific Wastes and Management Standards for Specific Types of Facilities, 48 Fed. Reg. 14,472, 14,475 (proposed Apr. 4, 1983) (to be codified at 40 C.F.R. pts. 260–61, 264–66). In describing its 1980 regulation, EPA wrote: “[T]he existing regulations establish broad jurisdiction over recycled materials and recycling operations, although this is tempered by regulating quite narrowly.” *Id.*

⁷⁷ *Id.*

⁷⁸ Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66). The regulations retained the basis of the 1983 proposal but significantly altered the classification and treatment of specific wastes. *See id.* at 616 (adhering to conceptual approach while making substantive changes).

⁷⁹ Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,760 (Oct. 30, 2008) (to be codified at 40 C.F.R. § 261.2(a)(1)).

⁸⁰ *Id.* (to be codified at 40 C.F.R. § 261.2(a)(2)(i)–(ii)); 40 C.F.R. § 261.2(a)(2)(2008). In 1997, EPA added certain “military munitions” to the class of discarded materials that are solid wastes. Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 Fed. Reg. 6622, 6625–28 (Feb. 12, 1997) (to be codified at 40 C.F.R. pts. 260–66, 270).

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Before plunging into EPA's inclusion of recycled materials, a few words about materials that are defined as solid waste by virtue of being "abandoned." The regulation provides that a material is "abandoned" if it is "disposed of" or "burned or incinerated" or "accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated."⁸¹ Although determining whether materials have been abandoned can raise difficult issues, this provision probably comports most closely with the common meaning of "discarded." Indeed, the preamble to the 1985 regulation simply states that "[b]y saying 'abandoned,' we do not intend any complicated concept, but simply mean thrown away."⁸²

EPA's coverage of recycled materials is far more complex. The regulation explains whether or not a material is a solid waste if "recycled" as provided in 40 C.F.R. § 261.2(c).⁸³ This section contains EPA's infamous "matrix" that classifies a recycled material is a waste if it falls within a category marked by an asterisk as follows:

	Use constituting disposal (§ 261.2(c)(1))	Energy recovery/ fuel (§ 261.2(c)(2))	Reclamation (§ 261.2(c)(3)) (except as provided in 261.4(a)(17) for mineral processing secondary materials) ⁸⁴	Speculative accumulation (§ 261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 C.F.R. Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	—	(*)
By-products (listed in 40 C.F.R. 261.31 or 261.32)	(*)	(*)	(*)	(*)

⁸¹ 40 C.F.R. § 261.2(b) (2008).

⁸² 50 Fed. Reg. at 627.

⁸³ 40 C.F.R. § 261.2(c) (2008); 73 Fed. Reg. at 64,760 (to be codified at 40 C.F.R. § 261.2(c)(3)).

⁸⁴ EPA's 2008 regulations, discussed below, establish new exclusions for reclaimed materials. This heading in the matrix has been modified to cross-reference these new exclusions. 73 Fed. Reg. at 64,760 (to be codified at 40 C.F.R. § 261.2(c)); see *supra* notes 142–93 and accompanying text.

	Use constituting disposal (§ 261.2(c)(1))	Energy recovery/ fuel (§ 261.2(c)(2))	Reclamation (§ 261.2(c)(3)) (except as provided in 261.4(a)(17) for mineral processing secondary materials) ⁸⁵	Speculative accumulation (§ 261.2(c)(4))
	1	2	3	4
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	—	(*)
Commercial chemical products listed in 40 C.F.R. 261.33	(*)	(*)	—	—
Scrap metal other than excluded scrap metal (see 261.1(c)(9))	(*)	(*)	(*)	(*)

Thus, to determine if a recycled material is a solid waste, it is necessary to identify both the type of material and the manner of recycling.

A recyclable material can only be a waste if it falls within the vertical list of sludges, by-products, commercial chemical products or scrap metals, collectively referred to as the undefined class of “secondary materials.”⁸⁶ Each of these materials is separately defined:

Sludges. “Sludges” are generally defined to include wastes produced by the operation of air or water pollution control equipment.⁸⁷

By-products. “By-products” are defined as a “material that is not one of the primary products of a production process and is not solely or separately produced by the production process.”⁸⁸ The regulations specifically distinguish “by-products,” which may be wastes if recycled, from the category of “co-products” that are not wastes.⁸⁹

Listed Commercial Chemical Products. “Commercial chemical products” as a category of wastes is defined by cross-reference to a group of “off-specification”

⁸⁵ EPA’s 2008 regulations, discussed below, establish new exclusions for reclaimed materials. This heading in the matrix has been modified to cross-reference these new exclusions. 73 Fed. Reg. at 64,760 (to be codified at 40 C.F.R. § 261.2(c)); see *supra* notes 142–93 and accompanying text.

⁸⁶ 50 Fed. Reg. at 618.

⁸⁷ See 40 C.F.R. § 261.1(c)(2) (2008) (referencing *id.* § 260.10).

⁸⁸ *Id.* § 261.1(c)(3).

⁸⁹ *Id.* The definition of by-product states: “The term does not include a co-product that is produced for the general public’s use and is ordinarily used in the form it is produced by the process.” *Id.*

commercial products that EPA has listed as hazardous waste.⁹⁰ Thus, it expressly applies only to a specific list of chemical products that are not suitable for their intended purposes. Incredibly, EPA has stated that this category, although expressly limited to these listed commercial chemical products, can generally apply to any recycled commercial chemical product.⁹¹ Go figure.

Scrap Metal. “Scrap metal” is basically defined to include big chunks of metal.⁹² In other words, scrap metal does not generally include wastes that are simply contaminated with high concentrations of metals.

Under the matrix, however, these secondary materials can only be solid wastes if they are recycled through the specific means identified by the horizontal list of recycling activities. Each of these types of recycling is separately defined. Each term deserves some comment.

Use Constituting Disposal. “Use constituting disposal” is limited to recycling that involves placement of a product on the land.⁹³ Spraying waste oil on the ground as a dust suppressant would be recycling through “use constituting disposal.” Including materials as ingredients in asphalt that is applied to the ground may also be a type of recycling that would be “use constituting disposal.”

Energy Recovery/Fuel. “Energy Recovery/Fuel” applies to recycling by burning a material for energy recovery or to make a fuel that is burned to produce energy.⁹⁴ This category of recycling is in contrast to “incineration” which is a process intended simply to dispose of wastes.

Reclamation. “Reclamation” is defined to include two different types of recycling.⁹⁵ First it includes processing to recover valuable materials.⁹⁶ An example used by EPA is the recovery of lead from old batteries. The second type of reclamation involves “regeneration” of spent materials.⁹⁷ This would include, for example, removing contaminants from a used solvent so that the solvent can be reused. As discussed below, EPA, in 2008, established a series of new exclusions from classification as a solid waste for materials that are reclaimed.⁹⁸

⁹⁰ *Id.* § 261.2(c) tbl.1 (cross-referencing the off-specification commercial chemical products listed in 40 C.F.R. § 261.33).

⁹¹ In a 1985, “technical correction” to the definition of solid waste, EPA wrote:

Although we do not directly address non-listed commercial chemical products in the rules, their status would be the same as those that are listed in § 261.33—That is, they are not considered solid wastes when recycled except when they are recycled in ways that differ from their normal manner of use. This is the same relationship that exists between discarded commercial chemical products that are listed in § 261.33, and those that exhibit a characteristic of hazardous waste. We believe that this point is implicit in the rules, as it is implicit in existing §§ 261.3 and 261.33.

Hazardous Waste Management System; Definition of Solid Waste; Corrections, 50 Fed. Reg. 14,216, 14,219 (Apr. 11, 1985) (to be codified at 40 C.F.R. pts. 260–61, 266).

⁹² 40 C.F.R. § 261.1(c)(6) (2008).

⁹³ *Id.* § 261.2(c)(1).

⁹⁴ *Id.* § 261.2(c)(2). RCRA section 3004(q) contains specific statutory authority to regulate hazardous wastes used to produce fuel. Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6924(q) (2000).

⁹⁵ 40 C.F.R. § 261.1(c)(4) (2008).

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ See *supra* notes 142–93 and accompanying text.

Speculative Accumulation. “Speculative Accumulation” essentially involves long-term storage of potentially recyclable materials without actually using them for recycling.⁹⁹ Under EPA’s definition, speculative accumulation generally occurs if less than seventy-five percent of the accumulated material is recycled in a calendar year.¹⁰⁰

Inherently Waste-like. EPA has also established a separate regulatory basis for regulating recyclable materials; the regulations define a small group of “inherently waste-like” materials as solid wastes if “recycled in any manner.”¹⁰¹ Thus, unlike the recyclable materials specified through the matrix, EPA claims that these “inherently waste-like” materials are solid wastes regardless of whether they are recycled through means specified on the matrix. Although this designation sounds broad, it in fact applies to a very limited group of dioxin containing materials and materials fed into a halogen acid furnace.¹⁰² EPA has promulgated specific criteria that it will use in designating a material as “inherently waste-like” that include whether the material 1) contains toxic constituents not found in analogous raw materials and that do not contribute to the recycling process or 2) will pose a “substantial risk to human health and the environment when recycled.”¹⁰³

Confused? You ain’t seen nothing yet.

Although a recycled material may be a solid waste if it is designated with an asterisk in the matrix or is designated as “inherently waste-like,” the regulation then goes on to provide a number of exemptions, exclusions, and variances from classification as a solid or hazardous waste. The regulations also require identification of “sham” recycling activities.

261.2(e) Exemptions. 40 C.F.R. § 261.2(e) provides that materials that would otherwise be solid wastes if recycled are exempt from classification as a solid waste if they are recycled by being 1) used or reused in an industrial process without being reclaimed, 2) used or reused as an effective substitute for a commercial product, or 3) returned to their original production process without first being reclaimed.¹⁰⁴ This “apparent” exemption allows some materials that are recycled without first being reclaimed to avoid classification as a solid waste.¹⁰⁵ But EPA giveth and EPA taketh away; that exemption is not applicable if the materials are recycled through “use constituting disposal,” “energy recovery/fuel,” “speculative accumulation,” or are designated as “inherently waste-like.”¹⁰⁶

⁹⁹ *Id.* § 261.1(c)(8).

¹⁰⁰ *Id.*

¹⁰¹ *Id.* § 261.2(d).

¹⁰² *Id.* § 261.2(d)(1)–(2).

¹⁰³ *Id.* § 261.2(d)(3). Thus, the criteria, in part, reflect EPA’s long standing concern with “toxics along for the ride” (TAR), toxic materials contained in recyclable materials that do not contribute to the recycling process. See Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 637–38 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66). See *infra* note 235 and accompanying text for a discussion of the TAR factor as part of criteria for distinguishing between legitimate and sham recycling.

¹⁰⁴ 40 C.F.R. § 261.2(e)(1) (2008); See GABA & STEVER, *supra* note 21, at § 2:16.

¹⁰⁵ As discussed below, the provisions of 40 C.F.R. § 261.2(e) are, in fact, meaningless. They only operate to exempt materials that were never classified as solid wastes in the first place. See *infra* note 242 and accompanying text.

¹⁰⁶ 40 C.F.R. § 261.2(e)(2) (2008).

261.4 Exclusions. A material that is otherwise designated as a solid waste under 40 C.F.R. § 261.2 might still be excluded from classification as a solid or hazardous waste. 40 C.F.R. § 261.4(a) contains lists of specific materials that have been excluded from classification as a solid waste. 40 C.F.R. § 261.4(b) contains lists of materials that are excluded from classification as a hazardous waste.

260.30 Variance. EPA regulations also provide a largely unused variance mechanism that allows generators to petition EPA for a determination that their specific material should not be classified as a solid waste.¹⁰⁷

Sham Recycling. EPA has over the years attempted to distinguish legitimate from “sham” recycling. This distinction is somewhat misleading. EPA’s regulatory definition of solid waste includes “legitimate” recycling; that is the whole point of the matrix. Thus, under the EPA definition, legitimate recycling may or may not involve a solid waste depending on the application of the matrix. Legitimate recycling covered under the matrix is a solid waste; legitimate recycling not covered under the matrix is not a solid waste. Simple.¹⁰⁸

The purpose of classifying an activity as “sham” recycling is simply (or not so simply) to identify those activities that are, in effect, disposal. If I am legitimately “recycling” materials in ways not covered under the matrix, the materials would not be defined as a solid waste. If, however, this act of recycling is a “sham,” I am, in effect, abandoning the materials, and abandoned materials are solid wastes.

EPA has, over time, adopted a series of guidance statements that purport to establish criteria that characterize sham recycling.¹⁰⁹ Through these statements, EPA has identified a number of factors that are relevant to determining whether a transaction involves “sham” recycling. These factors include whether:

- a secondary material is ineffective or only marginally effective for the claimed use;¹¹⁰
- a secondary material is used in excess of the amount necessary for operating a process. The example given is the use of secondary materials

¹⁰⁷ *Id.* §§ 260.30–33; Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,758 (Oct. 30, 2008) (to be codified at 40 C.F.R. §§ 260.30, 260.33).

¹⁰⁸ Well, not quite. Don’t forget that “inherently waste-like” materials that are recycled, legitimately or not, are always solid wastes. *See supra* notes 100–02 and accompanying text.

¹⁰⁹ *See, e.g.*, Enforcement Guidance, 48 Fed. Reg. 11,157–58 (Mar. 16, 1983); Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 638–39 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66); Hazardous Waste Management System; Burning of Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces, 50 Fed. Reg. 49,164, 49,166 (Nov. 29, 1985); Burning of Hazardous Waste in Boilers and Industrial Furnaces, 52 Fed. Reg. 16,982, 17,001 (proposed May 6, 1987); Burning of Hazardous Waste in Boilers and Industrial Furnaces, 56 Fed. Reg. 7134, 7183–84 (Feb. 21, 1991). EPA’s policy on sham recycling is discussed in *United States v. Self*, 2 F.3d 1071, 1079–80 (10th Cir. 1993). *See GABA & STEVER, supra* note 21, at § 8:9 for a discussion of EPA’s past “sham recycling” policies.

¹¹⁰ *See* 50 Fed. Reg. at 638. The example provided in the preamble is the use of certain heavy metal sludges in concrete. *Id.* Use of this material is a sham since the sludges do not contribute any significant element to the concrete’s properties. *Id.* In *United States v. Marine Shale Processors*, 81 F.3d 1361, 1366 (5th Cir. 1996), the court held that the creation of a product using hazardous waste may be sham recycling if the waste does not legitimately contribute to production of the product.

containing chlorine in a process requiring chlorine in excess of the chlorine levels required;¹¹¹

- the secondary material is not as effective as that which it is replacing;¹¹²
- there is an absence of records concerning the transaction;¹¹³ and
- the secondary materials are not handled in a manner consistent with their use as raw materials or commercial product substitutes.¹¹⁴

Materials involved in “sham” recycling will be classified as “abandoned” solid wastes.¹¹⁵ As discussed below, EPA, in its 2008 rule, promulgated a set of “legitimacy criteria” that incorporate elements of its past guidance.¹¹⁶ The new criteria are, however, applicable only to a limited set of situations.¹¹⁷

C. EPA’s Regulation of Recyclable Materials and Recycling Activities

Classification of a hazardous recyclable material as a solid waste under the regulatory definition potentially brings it within the Subtitle C regulatory scheme. EPA, however, provides special regulatory treatment of some recyclable materials and recycling.

First, EPA does not generally regulate the recycling process itself.¹¹⁸ Therefore, once a recyclable material enters the recycling process, application of the Subtitle C requirements in most case ends. This produces some very interesting consequences. If a recyclable hazardous waste is stored at the recycling facility before being recycled, the facility is subject to regulation as a hazardous waste storage facility.¹¹⁹ If the recyclable hazardous waste is directly inserted into the recycling process without storage (for example, a tanker truck transporting hazardous liquid wastes directly pumps the material into the recycling process), the recycling facility is not regulated as a RCRA “treatment, storage, and disposal

¹¹¹ 50 Fed. Reg. at 638. If, however, the recycler establishes product specifications “in accord with those generally used in the industry” then use of secondary materials complying with those product specifications may not be sham recycling. *Id.*

¹¹² On the other hand, if the material is as effective as virgin materials its use may not be a sham. EPA states that spent pickle liquor is known to be as effective as virgin materials when used as a phosphorous precipitant in wastewater treatment. *Id.*

¹¹³ *Id.* One preamble states that EPA “views with skepticism situations where secondary materials are ostensibly used and reused but the generator or recycler is unable to document how, where, and in what volumes the materials are being used and reused.” *Id.*

¹¹⁴ *Id.* EPA has asserted, for example, that recycling to recover precious metals may be viewed as a sham if the recyclable material is not handled in a method which minimizes loss. *See id.*

¹¹⁵ EPA has stated that: “If EPA or an authorized state agency determines that a process is not legitimate recycling, the activity would be considered waste treatment or disposal and would thus be subject to regulation under RCRA Subtitle C, if hazardous.” Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558, 61,582 (proposed Oct. 28, 2003) (to be codified at 40 C.F.R. pts. 260–61). Facilities engaged in “sham” recycling will also be classified as TSDFs that require a RCRA permit in order to legally operate. *Id.* at 61,583.

¹¹⁶ *See infra* notes 194–201 and accompanying text.

¹¹⁷ *See infra* note 196 and accompanying text.

¹¹⁸ 40 C.F.R. § 261.6(c)(1) (2008) states, parenthetically: “(The recycling process itself is exempt from regulation except as provided in § 261.6(d).”

¹¹⁹ *Id.*

facility” (TSDF).¹²⁰ Thus, recycling facilities are only subject to RCRA permitting if they store recyclable materials prior to recycling.

Second, EPA does not generally assert RCRA jurisdiction over products produced from regulated recyclable solid wastes.¹²¹ With the significant exceptions of hazardous waste derived fuels and products derived from hazardous waste that are applied to the land, products produced from the recycling of hazardous wastes are not themselves regulated as hazardous wastes.¹²²

Third, EPA exempts certain types of recycled hazardous waste from any regulation at all. Recycled scrap metal, for example, is totally exempt from the regulatory requirements that would otherwise apply to hazardous waste.¹²³

Fourth, EPA has established a series of tailored regulatory requirements for certain types of recycling. Among the most significant of these is EPA’s special regulatory treatment of hazardous wastes that are recycled by being burned in “boilers and industrial furnaces.”¹²⁴ Additionally, EPA, through a process known as “conditional exclusion,” has exempted certain recyclable materials from classification as hazardous wastes if managed in certain ways.¹²⁵

Finally, RCRA establishes a limited “notice and consent” requirement for the export of hazardous wastes.¹²⁶ Generators seeking to export hazardous wastes for recycling are required to provide EPA with notification, and EPA, in conjunction with the State Department, is responsible for providing notification to the receiving country and to any countries through which the waste will transit.¹²⁷ The waste may be exported if the receiving country consents to the shipment.¹²⁸

The net effect of this complex set of regulations is to regulate fully those solid wastes that are recycled as fuels or by land application, but only to regulate the transportation and storage of wastes that are reclaimed or exported.

¹²⁰ See *id.* § 261.6(c)(2).

¹²¹ *Id.* § 261.3(c)(2)(i). This provision includes the statement: “(However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)” *Id.*

¹²² *Id.* § 261.3(d)(2). Since 1981, EPA has justified excluding products made from hazardous wastes if the products were chemically identical to comparable products made from virgin materials. See *Zinc Fertilizers Made From Recycled Hazardous Secondary Materials*, 67 Fed. Reg. 48,393, 48,402 (July 24, 2002) (providing a discussion in the preamble to the zinc rule of the origin of the “identity principle”).

¹²³ See *id.* § 261.6(a)(3)(B)(ii).

¹²⁴ See 40 C.F.R. pt. 266 (2007) (“Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities”). This Part contains the specific requirements applicable to recycling by “use constituting disposal,” reclamation of “precious metals” and spent lead-acid batteries, and burning of hazardous wastes in “boilers and industrial furnaces.” *Id.* §§ 266.70(a)(3), 266.100(g), 266.202(a)(2).

¹²⁵ See, e.g., 40 C.F.R. § 261.4(a)(20) (2008) (conditional exemption for certain zinc-bearing materials used to make fertilizers). See generally Gaba, *supra* note 69, at 96.

¹²⁶ Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6938 (2000); 40 C.F.R. § 262, subpt. E (2008). See generally GABA & STEVER, *supra* note 21, at § 9:57–:66.2. As discussed below, EPA’s 2008 regulation creates a conditional exclusion for hazardous secondary materials exported for reclamation. The “condition” for the exclusion is compliance with essentially the same “notice and consent” requirements that apply to exported hazardous wastes. See *infra* notes 191–93 and accompanying text.

¹²⁷ 40 C.F.R. § 262.53(e) (2008).

¹²⁸ *Id.* § 262.52(b).

V. EPA'S 2008 RECLAMATION RULE

The obvious complexity of these provisions and their potential impact on legitimate recycling has long been recognized by EPA, and the Agency has, on a number of occasions, considered revisions to its approach to regulation of recyclable materials.¹²⁹ The most recent effort began with a star-crossed 2003 proposal.¹³⁰ The proposal had a number of different elements, but central to the proposal was an exclusion from coverage under Subtitle C of materials that were reclaimed by facilities in the same industrial classification code.¹³¹ Under the proposal, if a company in one North American Industry Classification System (NAICS) code sent materials across country for reclamation at another company that was in the same NAICS code, the materials would not be wastes.¹³² If that same company sent the same material across the street for identical recycling by a company in a different NAICS code, the material might be a hazardous waste.¹³³ This was EPA's attempt to implement the language of *AMC I* and *Ass'n of Battery Recyclers* that had indicated that materials were not wastes if they were part of

¹²⁹ The Agency has undertaken a variety of efforts to reconsider and revise its regulatory approach. EPA engaged in a long series of proposals, known as the Hazardous Waste Identification Rule (HWIR), to revise the scope of materials included as hazardous waste. See generally GABA & STEVER, *supra* note 21, at § 2:73. Among other things, the HWIR proposals attempted to limit the scope of materials subject to full Subtitle C coverage by establishing different classifications or "Tiers" of hazardous waste based on their concentrations of selected pollutants. See Hazardous Waste Identification Rule, 57 Fed. Reg. 21,461 (proposed May 20, 1992). EPA ultimately abandoned the HWIR approach. The final result of the HWIR proposals was to re-promulgate the original mixture and derived-from rules that the D.C. Circuit had found to have been originally promulgated without proper notice and comment. See GABA & STEVER, *supra* note 21, at § 2:70.

EPA has also undertaken "reform" efforts specifically directed at its management of recyclable materials under RCRA. In 1992, EPA created a Definition of Solid Waste Task Force to consider, among other things, ways to minimize the complexity of the definition and to reduce any "disincentives" to recycling induced by the regulations. OFFICE OF SOLID WASTE, EPA, RE-ENGINEERING RCRA FOR RECYCLING, DEFINITION OF SOLID WASTE TASK FORCE: REPORT AND RECOMMENDATIONS 1-3 (2002), available at <http://epa.gov/osw/hazard/dsw/downloads/tskfrpt.pdf>. The Task Force consulted with a variety of state, local, and industrial groups, and, in June 2002, issued a final report and set of recommendations relating to recycling. *Id.* at ii-viii. The report, "Re-engineering RCRA for Recycling," acknowledged the complexity of the current approach to recycling under RCRA, but itself recommended an extraordinarily complex set of provisions which would both expand and limit the class of recyclable materials subject to regulation under Subtitle C. *Id.* at 1-2 (acknowledging complexity); see *id.* at ii-viii (summarizing the recommendations).

Among other the things, the Task Force recommended a new scheme for "RCRA Recycling" to be regulated under Subtitle C. It suggested creation of four recycling categories: 1) Direct Reuse off-site of a spent material and Precious Metals Recovery; 2) On-site Recycling; 3) Intra-company recycling; and 4) Off-site Commercial Recycling. *Id.* at iii. The Task Force recommended differing sets of requirements for these different categories. Recycling activities would all be subject to certain notification and reporting requirements, a RCRA recycling manifest, and limits on land storage of recyclable materials. *Id.* at iii, iv. The requirements, however, would vary with respect to other RCRA obligations, and the most stringent requirements would apply to Off-site Commercial Recycling. *Id.* at v-vi. This Task Force report presumably received the same fate as other government reports.

¹³⁰ Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558 (Oct. 28, 2003).

¹³¹ *Id.* at 61,564-67.

¹³² See *id.*

¹³³ See *id.*

continuous process “within the generating industry itself.”¹³⁴ The proposal also contained a new regulatory provision that codified a set of “legitimacy criteria” to distinguish legitimate from sham recycling.¹³⁵

In 2007, EPA published a “supplemental proposal” that essentially abandoned the 2003 approach.¹³⁶ The 2007 supplemental proposal continued EPA’s efforts to restrict the application of Subtitle C to certain reclaimed materials, but the proposal contained a new set of conditional exclusions and a revised set of “legitimacy criteria.”¹³⁷ The 2007 proposal was largely adopted in the 2008 regulation that fundamentally, if confusingly, alters the treatment of recycled materials under RCRA.¹³⁸

The 2008 rule contains three distinct elements. First, it establishes a complex series of exclusions from classification as a solid waste of certain reclaimed materials.¹³⁹ Second, it codifies a set of “legitimacy criteria” that distinguish legitimate from sham recycling for certain purposes.¹⁴⁰ Third, it establishes a voluntary mechanism by which persons can obtain a formal determination that their materials do not constitute a solid waste.¹⁴¹ The preamble to the 2008 rule also contains EPA’s most recent statements on its criteria for determining what constitutes “discard” for purposes of defining the scope of RCRA authority.¹⁴²

A. Reclamation Exclusions

The 2008 regulation establishes a series of complicated conditional exclusions for reclaimed materials that would otherwise have been classified as solid waste under 40 C.F.R. § 261.2. This class of excluded materials is now labeled

¹³⁴ *Id.* at 61,562–63 (quoting *AMC I*, 824 F.2d 1177, 1190 (D.C. Cir. 1987)). See *infra* notes 264–74 for a discussion of these cases.

¹³⁵ 68 Fed. Reg. at 61,583, 61,583–87.

¹³⁶ Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172 (proposed Mar. 26, 2007) (to be codified at 40 C.F.R. § 260–61). In a charming bit of understatement, an EPA report stated: “In general, the commenters’ reactions to the proposal were less than favorable” OFFICE OF SOLID WASTE, EPA, AN ASSESSMENT OF ENVIRONMENTAL PROBLEMS ASSOCIATED WITH RECYCLING OF HAZARDOUS SECONDARY MATERIALS 2 (2007), available at <http://www.regulations.gov/fdmspublic/component/main?main=DocumentDetail&d=EPA-HQ-RCRA-2002-0031-0355> [hereinafter ENVIRONMENTAL PROBLEMS ASSESSMENT] (EPA-HQ-RCRA-2002-0031-0355).

¹³⁷ 72 Fed. Reg. at 14,198–99.

¹³⁸ Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668 (Oct. 30, 2008). The 2008 rule was signed by the Administrator on October 7, 2008 and published in the Federal Register on October 30, 2008. Thus, it was issued just months before the end of the George W. Bush Administration and weeks before the November 1, 2008 cutoff for promulgation of major new regulations issued by President Bush’s Chief of Staff. See Memorandum from Joshua B. Bolten, Chief of Staff, Issuance of Agency Regulations at the End of the Administration 1 (May, 9, 2008), available at http://www.whitehouse.gov/omb/inforeg/cos_memo_5_9_08.pdf. The 2007 Supplemental Proposal sketched out a number of the basic elements of the final 2008 regulation, but there was little detail. The final rule responds to issues raised by the proposal and addressed by comments, but the complexity and detail of the final regulation might have made reproposal for further comment (rather than promulgation) the better part of valor.

¹³⁹ See discussion *infra* Part V.A.

¹⁴⁰ See discussion *infra* Part V.B.

¹⁴¹ See discussion *infra* Part V.C.

¹⁴² See 73 Fed. Reg. at 64,675–79.

“hazardous secondary materials.”¹⁴³ These exclusions fall into three distinct categories: 1) hazardous secondary materials that are reclaimed “under the control” of the generator,¹⁴⁴ 2) hazardous secondary materials that are “transferred” to third party reclaimers,¹⁴⁵ and 3) hazardous secondary materials that are exported from the United States for reclamation.¹⁴⁶ Each of these exclusions is contingent on satisfaction of a variety of management, reporting and record keeping requirements. The regulations also contain provisions that address the status of reclaimed materials stored in transit to off-site reclamation.¹⁴⁷

1. Reclamation “under the Control” of the Generator

The regulation now largely excludes hazardous secondary materials reclaimed “under the control of the generator” from classification as a solid waste for purposes of Subtitle C. These exclusions are contained in two different parts of the regulation, but they all require that the reclamation be “under the control” of the generator.¹⁴⁸ EPA generally claims that if a material is legitimately reclaimed under the control of the generator it has not been discarded.¹⁴⁹ The simple rationale for this conclusion is EPA’s view that “the hazardous secondary material is being treated as a valuable commodity rather than as a waste. By maintaining control over, and potential liability for, the recycling process, the generator ensures that the hazardous secondary materials are not discarded.”¹⁵⁰ Presumably, a facility’s incentive and capacity to properly manage reclaimable materials means that the materials are not discarded.¹⁵¹ This position was supported by EPA studies that found that only a small percentage of recycling cases causing environmental damage were caused by recycling operations under the control of the generator.¹⁵²

¹⁴³ See *id.* at 64,669–70, 64,757 (to be codified at 40 C.F.R. § 260.10).

¹⁴⁴ *Id.* at 64,669–70, 64,760–61 (to be codified at 40 C.F.R. §§ 261.2(a)(2)(ii), 261.4(a)(23)).

¹⁴⁵ *Id.* at 64,669–70, 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)).

¹⁴⁶ *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(25)).

¹⁴⁷ *Id.* at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)).

¹⁴⁸ See *id.* at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)) (exclusion for hazardous secondary material reclaimed “under the control” of the generator in non-land-based units); *id.* at 64,760–61 (to be codified at 40 C.F.R. § 261.4(a)(23)) (conditional exemption for hazardous secondary material reclaimed “under the control” of the generator in land-based units).

The regulation provides that materials that are otherwise subject to specific management requirements under the conditional exemption provisions of 40 C.F.R. § 261.4(a) when reclaimed are not eligible for the exemption under 40 C.F.R. § 261.2(a)(2)(ii). *Id.* at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)). It also specifically excludes spent lead-acid batteries that are subject to management standards under 40 C.F.R. § 266.80 and 273.2 and materials meeting the listing description for K171 or K172. *Id.* (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)). EPA does not, however, expressly exclude other wastes that are subject to specific management standards under 40 C.F.R. Part 266 nor materials that are conditionally exempt from classification as hazardous wastes under 40 C.F.R. § 261.4(b). Thus, these materials are eligible for the new exclusions from classification as solid waste as an alternative to meeting specific management provisions. See *id.* at 64,713–15.

¹⁴⁹ See *id.* at 64,676 (“EPA continues to believe that when a generator legitimately recycles hazardous secondary material under its control, the generator has not abandoned the material . . .”).

¹⁵⁰ *Id.* at 64,676. In EPA’s view, there is no element of “discard” when materials are legitimately reclaimed under the control of the generator since the generator “still finds value in the hazardous secondary materials, has retained control over them, and intends to reclaim them.” *Id.*

¹⁵¹ See *infra* notes 237–40 and accompanying text for a discussion of this rationale.

¹⁵² 73 Fed. Reg. at 64,674.

The new term “under the control of the generator” is defined at 40 C.F.R. § 260.10.¹⁵³ The definition of “under control” includes three distinct situations:

On-site. A material is reclaimed “under the control” of the generator if it is reclaimed at the generator’s facility—in other words, this exclusion will apply if material is reclaimed “on-site” by the generator.¹⁵⁴

Off-site common control. A material is also reclaimed “under the control” of the generator if it is reclaimed at an off-site facility if that off-site facility is either 1) “controlled” by the generator or 2) both the generator and off-site facility are under the control of a common entity.¹⁵⁵ In other words, off-site reclamation at a facility owned by the generator or by a parent corporation of both the generator and the reclaimer would be “under the control” of the generator. EPA has established certain certifications that must be executed if the reclamation is conducted at an off-site facility.¹⁵⁶ Among other things, the generator must certify that either the generator or reclamation facility “acknowledged full responsibility for the safe management of the hazardous secondary material.”¹⁵⁷

Tolling Agreement. Reclamation is “under the control” of the generator if it occurs pursuant to a specified “tolling agreement.”¹⁵⁸ Under a tolling agreement, a facility (the tolling contractor) enters a contract with another entity (the tolling manufacturer) to produce an intermediate or product for the tolling contractor with materials provided by and under specifications established by the contractor.¹⁵⁹ Reclamation performed by the “tolling contractor” as part of a tolling agreement is “under the control” of the generator even though it was generated at the site of the tolling manufacturer but reclaimed “off-site” at the facility of the tolling contractor.¹⁶⁰

Although hazardous secondary material reclaimed “under the control” of the generator may be excluded from classification as a solid waste, the new regulation establishes two distinct regulatory exemptions to accomplish this result. For materials reclaimed in non-land-based units, the exclusion is contained in the basic definition of solid waste at 40 C.F.R. § 261.2(a)(2)(ii).¹⁶¹ For materials reclaimed in land-based units, the exclusion is expressed as an exclusion from classification as a solid waste under 40 C.F.R. § 261.4(a)(23).¹⁶² A “land-based unit” is defined as an area where hazardous secondary materials are placed “in or on the land” before recycling.¹⁶³ In both cases, the conditions necessary to establish the exclusion are

¹⁵³ *Id.* at 64,757–58 (to be codified at 40 C.F.R. § 260.10).

¹⁵⁴ *Id.* at 64,757 (to be codified at 40 C.F.R. § 260.10).

¹⁵⁵ *Id.* at 64,669, 64,757 (to be codified at 40 C.F.R. § 260.10).

¹⁵⁶ *Id.* (to be codified at 40 C.F.R. § 260.10).

¹⁵⁷ *Id.* (to be codified at 40 C.F.R. § 260.10). It is hard to imagine the significance of this acknowledgement. Does EPA intend to allow parties contractually to allocate their civil and criminal liability under RCRA by specifying which entity accepts “full responsibility?” The preamble to the 2008 final rule contains almost no discussion of this requirement. *See id.* at 64,680, 64,726.

¹⁵⁸ *See id.* at 64,669, 64,757–58 (to be codified at 40 C.F.R. § 260.10).

¹⁵⁹ *Id.* (to be codified at 40 C.F.R. § 260.10).

¹⁶⁰ *Id.* (to be codified at 40 C.F.R. § 260.10).

¹⁶¹ *Id.* at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)).

¹⁶² *Id.* (to be codified at 40 C.F.R. § 261.4(a)(23)).

¹⁶³ *Id.* at 64,758 (to be codified at 40 C.F.R. § 260.10).

the same.¹⁶⁴ In both cases, the regulations provide that the exclusion is conditioned on the hazardous secondary materials being “contained.” As discussed below, this distinction in treatment based *solely* on whether the materials are stored in land-based units prior to reclamation would seem directly to contradict the holding in *Ass’n of Battery Recyclers*.¹⁶⁵

In addition to establishing that reclamation is “under the control” of the generator, the generator must also satisfy a series of other requirements including:

- Containment of the hazardous secondary material prior to reclamation;¹⁶⁶
- No speculative accumulation;¹⁶⁷ and
- Legitimate recycling.¹⁶⁸

Generators of excluded hazardous secondary materials are subject to notification and reporting requirements.¹⁶⁹

The effect of these provisions is largely to exclude all hazardous materials reclaimed onsite (and some cases off-site) from regulation under Subtitle C subject to notification of the government and compliance with limited regulatory requirements.

2. Reclamation by Third-Party Reclaimers

Hazardous secondary materials sent for reclamation by a third-party that is not “under the control” of the generator is subject to a different conditional exclusion

¹⁶⁴ Compare *id.* at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)), with *id.* at 64,760–61 (to be codified at 40 C.F.R. § 261.4(a)(23)). EPA states that the requirements applicable to materials reclaimed in land-based units “are identical to those that apply to hazardous secondary materials generated and reclaimed under the control of the generator” in land-based units. *Id.* at 64,669.

EPA originally proposed the distinct treatment of materials contained in “non-land-based” units because of the specific rationale that such materials might not be contained and therefore had a special element of discard. See Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172, 14,178 (Mar. 26, 2007). As a condition of the exclusion, the proposal required that materials reclaimed in land-based units be “contained.” *Id.* In the 2008 final regulation, however, EPA specifically provided that materials reclaimed in “non-land-based units” must also be “contained,” thus making the two exclusions substantively identical. 73 Fed. Reg. at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)). Why EPA retained the separate regulatory treatment of these two reclamation scenarios passeth understanding.

¹⁶⁵ See *infra* notes 270–73 and accompanying text.

¹⁶⁶ 73 Fed. Reg. at 64,669, 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)). EPA states that hazardous secondary material will not be considered to be “contained” if there has been a “significant release” from the land-based or non-land-based unit. See *id.* at 64,729.

¹⁶⁷ *Id.* at 64,669, 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)).

¹⁶⁸ *Id.* at 64,760 (to be codified at 40 C.F.R. § 261.2(a)(2)(ii)). The exclusion is specifically inapplicable, however, to reclamation of materials subject to other specific regulatory exclusions (including lead acid batteries) and certain listed wastes. See *id.*

¹⁶⁹ See *id.* at 64,738–41, 64,759 (to be codified at 40 C.F.R. § 260.42) (describing notification requirements for hazardous secondary materials). EPA asserts authority to impose a notification requirement under section 3007 of RCRA, a provision which gives EPA data gathering authority. See *id.* at 64,739; see also *infra* notes 326–28 and accompanying text. EPA states that notification is not a prerequisite to obtain the exclusion from classification as a solid waste. See 73 Fed. Reg. at 64,739. Thus, entities that fail to provide required notification may be subject to civil liability but will not lose the exclusion applicable to its hazardous secondary materials. See *id.*

found at 40 C.F.R. § 261.4(a)(24).¹⁷⁰ EPA refers to this as the “transfer-based” exclusion.¹⁷¹ EPA’s rationale for this exclusion differs from the “under the control” exclusion. In EPA’s view, third-party reclaimers do not have the same inherent financial incentives to properly manage hazardous materials, and thus EPA has imposed more significant regulatory requirements as a condition for the exclusion.¹⁷² One obligation is for the generator to make “reasonable efforts” to document proper management by the third-party reclaimer.¹⁷³ In an odd bit of logic, EPA stated materials generated by “companies who take this type of responsibility are not being discarded.”¹⁷⁴ EPA also notes that a significant number of environmental damages cases have been associated with recycling at off-site third-party facilities.¹⁷⁵

There are a number of elements to this conditional exclusion:

“*Reasonable Efforts*” *Mini-Due Diligence Audit*. Central to the “transfer-based” exclusion is a requirement that the generator make “reasonable efforts” to ensure that the third-party reclaimer “intends to properly and legitimately reclaim the hazardous secondary material” and that the reclaimer will manage the material “in a manner that is protective of human health and the environment.”¹⁷⁶ The regulation itself contains a series of five questions that the generator “must” answer affirmatively with respect to each reclamation facility.¹⁷⁷ The questions constitute a “mini-audit” regarding the legitimacy of the current and past activities of the reclaimer. The regulation contains a documentation and recordkeeping requirement with respect to the mini-audit.¹⁷⁸ It is noteworthy that EPA states that a generator who properly performs a “reasonable efforts” audit will not lose its exemption even

¹⁷⁰ 73 Fed. Reg. at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)).

¹⁷¹ *Id.* at 64,669–70.

¹⁷² *See id.* at 64,677–79.

¹⁷³ *Id.* at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)(v)(B)).

¹⁷⁴ *Id.* at 64,678. EPA also states that “the generator is required to make reasonable efforts to ensure that its hazardous secondary material are properly and legitimately reclaimed demonstrates that the generator is not simply disposing of the material, but instead is taking responsibility that the hazardous secondary materials will be recycled.” *Id.* at 64,719. Companies are required to assure that the disposal facility to which they send waste has a proper TSD permit, but that hardly demonstrates that its material is not a waste being disposed. See *infra* notes 220–41 and accompanying text for a discussion of EPA’s criteria for determining when a material is “discarded” and hence subject to regulation under RCRA.

¹⁷⁵ 73 Fed. Reg. at 64,677.

¹⁷⁶ *Id.* at 64,761–62 (to be codified at 40 C.F.R. § 261.4(a)(24)(v)(B)).

¹⁷⁷ *Id.* (to be codified at 40 C.F.R. § 261.4(a)(24)(v)(B)(1)–(5)). The questions, applicable to the third-party reclaimer and, in some cases, an intermediate storage facility, and are, in most cases, to be answered based on “reasonable efforts” to obtain the available information. *Id.* at 64,761. The questions include:

- 1) Is the reclamation legitimate?
- 2) Has the reclaimer provided the required notifications to the government?
- 3) Have there been formal enforcement actions taken against the reclaimer or intermediate facility?
- 4) Does the reclaimer and intermediate have “the equipment and trained personnel to safely recycle the hazardous secondary material?”
- 5) Does the facility satisfy conditions for proper disposal of any residuals generated from the recycling?

Id.

¹⁷⁸ *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(24)(v)(C)).

if the third-party reclaimer subsequently mismanages the hazardous secondary material.¹⁷⁹

Management Practices. There are some actual management obligations imposed on the reclaimer as a condition of the exclusion.¹⁸⁰ The third-party reclaimer must manage the hazardous secondary material “in a manner that is at least as protective as that employed for analogous raw material.”¹⁸¹ Additionally, the regulation requires that the material be “contained” at the reclamation facility.¹⁸² Presumably, this is an additional management obligation even if analogous raw materials were not “contained.”

Financial Assurance. A very significant condition of this exclusion is that the third-party reclaimer must document “financial assurance.”¹⁸³ This means that the reclaimer must ensure that it has sufficient financial resources to address releases of hazardous materials, closure of the reclamation facility, and provision of compensation in the event of a release.¹⁸⁴ Although this financial assurance obligation is similar to that imposed on permitted RCRA facilities, the regulations establish a specific and complex set of “transfer-based” financial assurance mechanisms at 40 C.F.R. Part 261 that third-party reclamation facilities may employ.¹⁸⁵

Mini-Manifest and Recordkeeping. The regulations contain requirements for documentation and receipt of the hazardous secondary materials transferred for reclamation.¹⁸⁶

In-transit Storage. The regulation generally authorizes hazardous secondary materials to be stored for up to ten days while in transit.¹⁸⁷ If the materials are stored for more than ten days, the storage site is an “intermediate facility” that is subject to essentially the same requirements that apply to third-party reclaimers.¹⁸⁸

Other Conditions. As with the “under the control” exclusion, the “transfer-based” exclusion also requires that there be no “speculative accumulation,”¹⁸⁹ the

¹⁷⁹ See *id.* at 64,687.

¹⁸⁰ It is perhaps a mistake to think of these management obligations as a “condition of the exclusion.” As noted above, EPA states that, with respect to generator liability, a material will still be excluded from classification as a waste even if the third-party reclaimer subsequently mismanages the material. *Id.* Presumably, the hazardous secondary material becomes a newly generated waste at the point of mismanagement by the third-party reclaimer.

¹⁸¹ *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(24)(vi)(D)). The regulation and preamble provide little insight into what management obligations this actually imposes on the reclaimer.

¹⁸² *Id.* (to be codified at 40 C.F.R. § 261.4(a)(24)(vi)(D)).

¹⁸³ *Id.* (to be codified at 40 C.F.R. § 261.4(a)(24)(vi)(F)). The complex set of financial assurance mechanisms available to the third-party reclaimer are specified in a new 40 C.F.R. Part 261. *Id.* at 64,764–88 (to be codified at 40 C.F.R. pt. 261, subpt. H).

¹⁸⁴ See *id.* at 64,764–88 (to be codified at 40 C.F.R. pt. 261, subpt. H).

¹⁸⁵ Unlike the financial obligation imposed on permitted Subtitle C landfills, the regulations do not impose financial requirements for “post-closure” care since reclamation facilities should not plan for hazardous materials remaining in place. See *id.* at 64,692.

¹⁸⁶ *Id.* at 64,762 (to be codified at 40 C.F.R. §§ 261.4(a)(24)(v)(D)–(E), 261.4(a)(24)(vi)(A)–(C)).

¹⁸⁷ *Id.* at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)(ii)).

¹⁸⁸ *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(24)(vi)); see *id.* at 64, 684.

¹⁸⁹ *Id.* at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)(i)).

reclamation is “legitimate,”¹⁹⁰ and the generator, intermediate facility, and third-party reclaimer provide the government with “notification” of their activities.¹⁹¹

3. *Export Exclusion*

The regulations also conditionally exclude hazardous secondary materials from classification as a solid waste if they are exported for reclamation at a facility outside of the United States.¹⁹² The core of this exclusion is satisfaction of what appears to be largely the same “notice and consent” provisions that apply to the export of hazardous wastes under RCRA.¹⁹³ The main purpose of this exclusion seems not to be the elimination of significant regulatory obligations on the export of hazardous waste, but rather to change the status and classification of the exported material.¹⁹⁴

B. Legitimacy Criteria

EPA has over the years issued a number of statements on its criteria for distinguishing legitimate from “sham” recycling.¹⁹⁵ The new regulation now codifies “legitimacy criteria” for purposes of determining whether a recycling activity is “legitimate.”¹⁹⁶ EPA, however, limits the applicability of these formal legitimacy criteria to implementation of the new exclusions and for making “non-waste” determinations.¹⁹⁷

The legitimacy criteria are similar to those contained in previous EPA guidance.¹⁹⁸ They include a mandatory component that must be satisfied: the

¹⁹⁰ *Id.* (to be codified at 40 C.F.R. § 261.4(a)(24)(iv)).

¹⁹¹ *Id.* at 64,759 (to be codified at 40 C.F.R. § 260.42). This exclusion is also not applicable to materials subject to other conditional management requirements under 40 C.F.R. § 261.4(a), spent lead-acid batteries, and K171 and K172 wastes. *Id.* at 64,761 (to be codified at 40 C.F.R. § 261.4(a)(24)(iii)).

¹⁹² *Id.* at 64,762 (to be codified at 40 C.F.R. § 261.4(a)(25)).

¹⁹³ *Id.* at 64,698; Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6938(c)–(d) (2000).

¹⁹⁴ It is not clear to this author what effect this exclusion might have on the operation of the Organization for Economic Cooperation and Development (OECD) Decisions and the Basel Convention on trade in hazardous wastes. The OECD Decision to which the United States is subject regulates transfer of wastes among members of the OECD. *See* 73 Fed. Reg. at 64,737. The Basel Convention prohibits the trade in certain defined “wastes,” including trade involving recycling, between ratifying and nonratifying parties to the Convention. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, *opened for signature* Mar. 22, 1989, UNEP/IG.80/3, 28 I.L.M. 657 (*entered into force* May 5, 1992). The United States has signed but not ratified the Basel Convention. *See* Secretariat of the Basel Convention, Basel Convention’s Ratifications, <http://basel.int/ratif/convention.htm> (last visited Nov. 9, 2008); 73 Fed. Reg. at 64,737. Although these international agreements may apply if the receiving country designates a material as a waste, it is possible that EPA’s exclusion of these materials from classification as a waste might affect the application of the agreements. EPA states that the regulation is “consistent with” the OECD and Basel agreements. *Id.*

¹⁹⁵ *See infra* notes 108–114 and accompanying text.

¹⁹⁶ 73 Fed. Reg. at 64,707–08, 64,759–60 (to be codified at 40 C.F.R. § 260.43).

¹⁹⁷ *See id.* at 64,759 (to be codified at 40 C.F.R. § 260.43(a)). In other words, materials that are sent for “sham recycling” as described under EPA policy statements may be classified as abandoned wastes even if not subject to the reclamation exclusions provided by the new regulation. *See id.* at 64,707–08.

¹⁹⁸ EPA has stated that its legitimacy criteria are not “substantively different” from its long-standing policies. *See id.* at 64,700.

hazardous secondary material must provide a “useful contribution” to the recycling process or the product of the recycling process *and* the recycling process must produce a “valuable product or intermediate.”¹⁹⁹ Additionally, the regulation provides a series of factors that must be “considered” in determining whether recycling is legitimate.²⁰⁰ These include whether the materials is “managed” as a valuable commodity, and whether the product of recycling does contain concentrations of certain hazardous substances at concentrations that are “significantly” greater than that found in “analogous products” or exhibit a hazard characteristic not exhibited by an analogous product.²⁰¹ The regulation provides that these factors must be “considered” but need not be met for recycling to be considered legitimate.²⁰²

C. Nonwaste Determinations

EPA has for over twenty years had a little used mechanism by which generators could seek a variance from classification of their materials as a solid waste.²⁰³ In the 2008 regulations, EPA has added new mechanisms by which generators can voluntarily apply for a case-by-case determination that their materials are not classified as a solid waste.²⁰⁴ There are two quite distinct grounds for these “non-waste determinations” contained in the new 40 C.F.R. § 260.34: the material is reclaimed as part of a continuous production process or the material is indistinguishable from a product or intermediate.²⁰⁵

1. Continuous Process Nonwaste Determination

Under 40 C.F.R. § 260.34(b), an applicant can request a determination from EPA or, in some cases a state, that its hazardous secondary material being reclaimed “in a continuous industrial process” is not a solid waste if the applicant demonstrates that the hazardous secondary material “is a part of the production process and is not discarded.”²⁰⁶ The determination is based on whether the recycling is “legitimate” under EPA’s legitimacy criteria and a variety of factors including whether 1) the management of the materials is part of the “continuous primary production process and is not waste treatment,” 2) the production process would use the material in a “reasonable time frame,” 3) hazardous constituents are reclaimed, rather than released to the environment, in significantly higher levels “than would otherwise be released by the production process,” and 4) “other relevant factors.”²⁰⁷

¹⁹⁹ *Id.* at 64,759 (to be codified at 40 C.F.R. § 260.43(b)). The regulation provides factors to determine if a material makes a “useful contribution,” and the product or intermediate produced by the recycling is “valuable.” *Id.* (to be codified at 40 C.F.R. § 260.43(b)(1)–(2)).

²⁰⁰ *Id.* at 64,759–60 (to be codified at 40 C.F.R. § 260.43(c)).

²⁰¹ *Id.* at 64,759 (to be codified at 40 C.F.R. § 260.43(c)(1)–(2)).

²⁰² *Id.* at 64,759–60 (to be codified at 40 C.F.R. § 260.43(c)(3)).

²⁰³ 40 C.F.R. § 260.30–.31 (2008); 73 Fed. Reg. at 64,758 (to be codified at 40 C.F.R. § 260.30).

²⁰⁴ 73 Fed. Reg. at 64,670, 64,758–59 (to be codified at 40 C.F.R. § 260.34).

²⁰⁵ *Id.* at 64,758–59 (to be codified at 40 C.F.R. § 260.34(b)–(c)).

²⁰⁶ *Id.* at 64,758 (to be codified at 40 C.F.R. § 260.34(b)).

²⁰⁷ *Id.* (to be codified at 40 C.F.R. § 260.34(b)(1)–(4)).

In a series of cases from *AMC I* to *Safe Food & Fertilizer*, the D.C. Circuit has consistently held that materials that are part of a “continuous production process in the generating industry” cannot be classified as a solid waste.²⁰⁸ In part, the 40 C.F.R. § 261.34(b) nonwaste determination simply implements these holdings. EPA is providing a mechanism by which a generator can receive assurance that materials are part of a continuous process and thus not a waste.

The mechanism is oddly structured, however. First, the criteria seem only tangentially related to a determination of whether a material is being used in a continuous production process.²⁰⁹ It is not clear why a material is not part of a continuous process because there is a greater statistical release of hazardous constituents than would “otherwise” be released by the production process. If it is a part of the production process, it is not resulting in an increased release. If it is not a part of the process, then why assess the rate of release of hazardous constituents?

Second, the nonwaste determination includes an assessment of whether the material is reclaimed as part of a “continuous *primary* production process.”²¹⁰ EPA does not discuss the significance of the requirement that the process be “primary.” In the preamble it cites to *AMC II* when referring to this requirement, but EPA is apparently only using the citation to *AMC II* to justify excluding waste treatment from being part of a continuous production process.²¹¹ No case addressing the “continuous production process” issue has ever referred to or limited its holding to “primary” production processes.

Third, only materials that are “reclaimed” as part of a continuous production process are eligible for nonwaste determinations and subject to its criteria.²¹² An “in process” material that is stored before an additional processing step that does not constitute reclamation is presumably not a waste,²¹³ but the generator cannot take advantage of the nonwaste determination process to document its status. Further, nonreclaimed in-process materials are not subject to the criteria applicable to the nonwaste determination and thus may not be a waste even if they are not contained and cause a significant release.²¹⁴

²⁰⁸ See *infra* notes 263–73 and accompanying text.

²⁰⁹ EPA states that the release of a significant concentration of hazardous material is an “indication that they are discarded.” See 73 Fed. Reg. at 64,752.

²¹⁰ *Id.* at 64,758 (to be codified at 40 C.F.R. § 260.34(b)(1)) (emphasis added).

²¹¹ See *id.* at 64,711.

²¹² *Id.* at 64,758 (to be codified at 40 C.F.R. § 261.34(b)) (stating nonwaste determinations available for hazardous secondary materials that are “reclaimed” as part of a continuous production process).

²¹³ It would not be “abandoned” nor a reclaimed “by-product” or “spent material” and therefore never defined as a waste under the basic provisions of 40 C.F.R. § 261.2. EPA has indicated that materials subject to “incidental processing,” as opposed to reclamation, would not be classified as solid wastes. Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 639–40 (Jan. 4, 1985), and EPA has published guidance on identifying such incidental processing activities. OFFICE OF SOLID WASTE, EPA, GUIDANCE FOR IDENTIFYING INCIDENTAL PROCESSING ACTIVITIES (2005), available at [http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/87BF25FB0D76EB888525709E00453487/\\$file/14748.pdf](http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/87BF25FB0D76EB888525709E00453487/$file/14748.pdf). See GABA & STEVER, *supra* note 21, at § 2:12.

²¹⁴ See 40 C.F.R. § 261.3(e)(1) (2007).

2. Identical Product Nonwaste Determination

EPA provides a separate basis for obtaining a “non-waste determination.” Under 40 C.F.R. § 260.34(c), applicants may obtain a nonwaste determination by showing that their hazardous secondary material is “indistinguishable in all relevant aspects” from a product or intermediate.²¹⁵ This determination is based on an assessment of whether the materials are being legitimately recycled and whether 1) market participants treat the material as a product based on a variety of economic or contractual factors, 2) the chemical and physical identity of the material is comparable to commercial products or intermediates, 3) the material will be used in a reasonable time frame, 4) hazardous constituents in the hazardous secondary materials “when reclaimed” are released to the environment at “significantly higher levels” than would otherwise be released by the production process, and 5) other “relevant factors.”²¹⁶

EPA regulations have always provided that materials are not solid wastes if they are used as substitutes for commercial products as long as they can be used *without first being reclaimed*.²¹⁷

To the extent that this “identical product” determination merely provides a mechanism (and criteria) for documenting EPA’s long-standing policy, it is certainly useful.

This determination, however, applies to materials that are “reclaimed.” The criteria, for example, include a determination that the use constitute “legitimate recycling” under 40 C.F.R. § 260.43 (which applies only to recycling by reclamation) and the criteria specifically involve an assessment of hazardous constituents released when the materials are “reclaimed.”²¹⁸ The expansion of the “identical product” exclusion to reclaimed materials is both baffling and troubling.

EPA, in the past, has asserted an “identity principle” to justify exclusion of the products made from hazardous wastes from classification as a hazardous waste.²¹⁹ EPA has previously not extended an “identity principle” to exclude the reclaimable hazardous wastes themselves.

Further, it is hard to imagine circumstances in which this new nonwaste determination for reclaimable materials would apply. It would not apply to materials reclaimed as part of a continuous production process; that is separately addressed. It would not apply to on-site or off-site reclamation (not a part of a continuous process) that is “under the control” of the generator; that is a separate exclusion. It would not apply to recycling by burning for energy recovery or use constituting disposal; the determinations do not apply to these forms of recycling.²²⁰ Nor would it affect EPA’s general position that the final product produced from the reclamation process is not a waste nor that the recycling process is not regulated.

²¹⁵ 73 Fed. Reg. at 64,758–59 (to be codified at 40 C.F.R. § 260.34(c)).

²¹⁶ *Id.* at 64,759 (to be codified at 40 C.F.R. § 260.34(c)(1)–(5)).

²¹⁷ 40 C.F.R. § 261.2(e)(1) (2007). *See supra* notes 103–04 and accompanying text.

²¹⁸ 73 Fed. Reg. at 64,758–59 (to be codified at 40 C.F.R. § 260.34(c)).

²¹⁹ *See supra* note 121.

²²⁰ 73 Fed. Reg. at 64,751.

It would only apply if the hazardous secondary material is being reclaimed by a third-party. Presumably if lead bars were manufactured from virgin ore, lead contaminated hazardous secondary material would not be classified as a waste if it was “indistinguishable” from the virgin ore. The rather lengthy preamble to the final regulation gives very little information, and no examples, of this nonwaste determination option.

VI. PROBLEMS WITH EPA’S REGULATORY APPROACH

What’s wrong with EPA’s current regulatory approach to recycling? Working through EPA’s regulatory treatment of recycling essentially answers the question. The approach fails on three levels. First, EPA has failed to provide a coherent rationale for classifying a material as a solid waste subject to regulation under Subtitle C. As discussed below, this incoherence has several significant consequences. Second, the regulations are, in an exercise of understatement, confusingly drafted. The language and structure of the regulations make it more difficult than necessary to determine the applicable requirements. Third, EPA’s regulatory requirements themselves may unnecessarily discourage legitimate recycling.

A. Coherence

So what does EPA think makes a material a solid waste? Parsing through matrix designations, exclusions, conditional exemptions, “inherently waste-like designations,” “legitimacy criteria,” and sham recycling policies leaves, at least this writer, with a disquieting sense of confusion. There simply is no coherent rationale that underlies EPA’s approach to classification and regulation of solid wastes under RCRA.

EPA throughout its regulatory efforts has advanced a variety of arguments to justify classification of materials as solid wastes, and they have generally included some combination of the following factors:

Material is Similar to a Product. Perhaps the central element of EPA’s treatment of recyclable materials is an attempt to identify and exclude from regulation those recyclable materials and recycling activities that are “very similar to normal production operations or normal uses of commercial products.”²²¹ It is the basis for EPA’s “identical product” nonwaste determination,²²² and it is the underlying rationale for the “exclusion” factors identified in 40 C.F.R. § 261.2(e).²²³ It also forms the basis for the “identity principle” which EPA has

²²¹ Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 617 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66).

²²² 73 Fed. Reg. at 64,711–12, 64,758–59 (to be codified at 40 C.F.R. 260.34(c)). See *infra* notes 214–19 and accompanying text.

²²³ 40 C.F.R. § 261.2(e) (2008). EPA has, in fact, claimed on occasion that it does not have authority under RCRA to regulate industrial secondary materials that are subsequently used as ingredients in commercial processes. Responding to claims that EPA had broad jurisdiction over recycled secondary materials, EPA stated:

used to justify its exclusion from classification as solid waste of most, but not all, products made from recyclable materials.²²⁴

Materials Pose an Environmental Risk if Recycled. EPA has generally claimed that an environmental risk from recycling, legitimate or sham, may justify classification of a material as a solid waste.²²⁵ Certainly, this forms part of EPA's rationale for regulation of materials recycled through "use constituting disposal."²²⁶ It is also expressly listed as a factor relevant for classification of a material as "inherently waste-like."²²⁷ EPA's conditional exclusions from classification as a solid waste have also relied on the environmental harms associated with management of recycled materials.²²⁸ Similarly, EPA's new 2008 exclusions for certain reclamation activities contain requirements for "containment" and proper management by reclamation facilities.²²⁹ This general environmental concern is reflected in several opinions of the D.C. Circuit in which the court indicated that a

Our RCRA authority over recycling of hazardous secondary materials is broad, but has some limits. The legislative history indicates that Congress rejected an approach that would have required modifying production processes in order to reduce the volume of hazardous waste generated. This is because such restrictions "i(n) many instances would amount to interference with the productive (sic) process itself. . . ." H.R. Rep. No. 94-1491, 94th Cong. 2d Sess. at 26. The Agency accordingly has interpreted its jurisdiction so as to avoid regulating secondary materials recycled in ways that most closely resemble normal production processes. These types of recycling are use of secondary materials as ingredients or as direct commercial product substitutes, or (as explained below) use in a closed-loop type of production process.

50 Fed. Reg. at 638. This statement of the scope of its statutory authority was made in 1985 before the series of cases discussed above that may justify a more extensive claim of statutory authority over recyclable materials.

On its face, however, this statement seems incorrect. A congressional reluctance to require waste reduction through interference in the production process says nothing about concerns about subsequent recycling of materials that have ceased to be used as ingredients within the original production process from which they are generated. In other words, this congressional concern implicates the "point of generation" issue rather than the issue of subsequent authority to manage initially generated wastes.

²²⁴ Since 1981, EPA has justified excluding products made from hazardous wastes if the products were chemically identical to comparable products made from virgin materials. *See Zinc Fertilizers Made From Recycled Hazardous Secondary Materials*, 67 Fed. Reg. 48,393, 48,402 (July 24, 2002) (providing a discussion in the preamble to the zinc rule of the origin of the "identity principle").

²²⁵ EPA has stated it disagrees with the argument that the "hazard posed by recycling a material is not relevant in determining whether the material is a waste." 50 Fed. Reg. at 637 n.25.

²²⁶ EPA has justified regulation of "use constituting disposal" since that form of recycling can produce the same environmental harms that Congress identified when it adopted RCRA. *See Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Standards for the Management of Specific Wastes and Management Standards for Specific Types of Facilities*, 48 Fed. Reg. 14,472, 14,484 (proposed Apr. 4, 1983) (to be codified at 40 C.F.R. pts. 260-61, 264-66).

²²⁷ 40 C.F.R. § 261.2(d)(3)(ii) (2008).

²²⁸ *See, e.g., id.* § 261.4(a)(14), (17) (excluding certain recyclable materials from classification as a solid waste unless they are managed in a way that might produce a release into the environment). *See Gaba, supra* note 67 (discussing the significance of "mismanagement" as a basis for much of EPA's conditional exclusion provisions).

²²⁹ *See supra* notes 179-81 and accompanying text.

material may be classified as a solid waste based in part on consideration of whether it is “part of the waste disposal problem.”²³⁰

Recycling Activity is Similar to Disposal. EPA has justified its regulation of materials that are recycled through “use constituting disposal” and “burning/fuel production” based on claims that these recycling activities closely resemble the disposal practices of land disposal and incineration.²³¹

Materials are not Managed in a Manner Similar to Virgin Products. EPA has justified regulating some materials as solid wastes based on an assessment of whether they are managed in a manner similar to virgin materials.²³² In part, this argument reflects an “economic value” rationale: if entities properly manage materials to avoid loss, this suggests that the materials have value and are therefore more product-like than waste-like. Additionally, this argument reflects an environmental concern with regulating improper recycling practices that will produce environmental harm. This rationale is central to EPA’s conditional exclusion of off-site reclamation by third-parties.²³³

Materials are not “Contained” prior to Reclamation. EPA’s new reclamation exclusions specifically require that a hazardous secondary material be “contained” in order to be excluded from classification as a solid waste.²³⁴ EPA does not justify this condition as a necessary environmental control; rather EPA states that the absence of “containment” indicates that the material is not being managed as a valuable product, and thus, in EPA’s view, the absence of “containment” is indicia of “discard” sufficient to classify a recycled material as a waste.²³⁵

²³⁰ See, e.g., *Safe Food & Fertilizer v. EPA*, 350 F.3d 1263, 1268 (D.C. Cir. 2003); *American Petroleum Inst. v. EPA*, 906 F.2d 729, 740–41 (D.C.Cir.1990); *AMC II*, 907 F.2d 1179, 1186–87 (D.C.Cir.1990). See also *Revisions to the Definition of Solid Waste*, 73 Fed. Reg. 64,668, 64,720 (Oct. 30, 2008) (discussing the relationship of EPA’s management conditions for the “under the control” and “transfer-based” reclamation exclusions to the issue of “discard”).

²³¹ EPA generally claimed jurisdiction over recycling by land application since

[w]e read our jurisdiction as applying to waste-derived products whose recycling is similar to a normal form of waste management—in this case, land disposal. (The jurisdictional basis for the following provision on hazardous waste-derived fuels is similar, except that incineration is the waste management practice corresponding to recycling by burning.)

Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614, 628 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts. 260–61, 264–66).

²³² In an argument supporting the conditional exclusion of certain zinc waste, EPA argued a “market participant” doctrine. In this argument, EPA claimed that proper management of the materials indicated that they had value in the market place and were therefore not wastes. See *Safe Food & Fertilizer v. EPA*, 350 F.3d at 1269.

²³³ The transfer-based exclusion requires that the third-party manage hazardous secondary materials in a manner “at least as protective” as an analogous raw material. 73 Fed. Reg. at 64,691, 64,762 (to be codified at 40 C.F.R. § 261.4(a)(24)(vi)(D)).

²³⁴ *Id.* at 64,677 (to be codified at 40 C.F.R. §§ 261.2(a)(2)(ii), 261.4(a)(23)(i), 261.4(a)(24)(v)(A)).

²³⁵ See, e.g., *id.* This criterion seems contrary to *Ass’n of Battery Recyclers*. In *Ass’n of Battery Recyclers*, the court specifically rejected EPA’s classification of certain reclaimed materials as a solid waste solely because they were stored on land without proper containment prior to use in an industrial process. The court indicated that a material was not a waste if it was part of a “continuous industrial process,” and while the court suggested that materials stored in land-based units before recycling might be wastes if not part of a continuous process, the court rejected a regulation which used land-based storage to distinguish waste from nonwaste. *Ass’n of Battery Recyclers*, 208 F.3d 1047, 1051 (D.C. Cir. 2000). The issue, in the court’s view, was whether the material proceeded directly to an on-going

Toxic Constituents. EPA has regularly identified concerns with the use of recyclable materials that result in higher concentrations of toxic constituents in the final product than the levels that would be found if the product were produced from virgin materials.²³⁶ EPA's new "legitimacy criteria" expressly require an assessment of whether the product produced by recycling contains "significantly" greater concentrations of toxic pollutants than those found in analogous products.²³⁷ This is the "toxics along for the ride" (TAR) concern. The TAR issue, in part, suggests that recyclable materials are in fact being used for sham recycling—the value of the use of the recyclable material comes not from its value to the recycling process, but through an attempt to avoid the cost of disposal of the toxic constituents. In part, it also reflects the underlying environmental concern that recycling can produce environmental harms.

Liability, Responsibility, and Control. In a rather odd bit of logic, EPA bases its new "under the control" reclamation exclusions on a judgment that if a generator has the ability to "control" and has "liability" and "responsibility" for a hazardous secondary material, its recycling of that material will not constitute "discard."²³⁸ Certainly, an entity that may have financial or legal liability for an act of improper management is more likely to manage the material more properly. It is, however, not clear what that has to do with discard. A generator may have "liability, responsibility, and control" for wastes stored on-site, but that does not mean that the materials are not wastes. The whole point of RCRA is to place liability and

recycling process, not the way in which the material was managed. See *infra* notes 270–73 and accompanying text for a fuller discussion of *Ass'n of Battery Recyclers*.

Using an odd double negative, EPA states in the preamble to the 2008 rule that it "disagrees" that its requirement for "containment" contradicts "the court's finding in [*Ass'n of Battery Recyclers*] that EPA does not have the authority to define when hazardous secondary materials are not discarded." 73 Fed. Reg. at 64,720. EPA goes on to state that "[w]hile it is true that the court has said that materials recycled in a continuous process by the generating industry are not solid wastes, commentators have failed to demonstrate how hazardous materials that are *not* contained meet that description." *Id.* But that was essentially the issue addressed by the court: mere showing that a material was stored on land prior to recycling was not sufficient to show it was not part of a continuous process.

Further, it is self-evident that "containment" per se does not distinguish a product from a waste. Clearly virgin materials do not become wastes simply because they are not contained prior to use in a production process. It would be one thing to say that a material is a waste if not managed in a manner similar to an analogous product (and EPA does say that), but to suggest that "containment" is an independent basis for distinguishing a product from a waste is, to say the least, problematic after *Ass'n of Battery Recyclers*.

²³⁶ See, e.g., Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172, 14,199 (proposed Mar. 26, 2007) (to be codified at 40 C.F.R. pts. 260–61) (discussing "toxics along for the ride" as part of EPA's proposed legitimacy criteria).

²³⁷ See 73 Fed. Reg. at 64,700–04.

²³⁸ See *supra* notes 148–49 and accompanying text. EPA, for example, states with respect to the "under the control" exclusion, that "the fact that the generator maintains control and liability for the hazardous secondary materials, either by managing them on-site, within the same company, or under a specific tolling contract, is itself an indication that the materials are not discarded." 73 Fed. Reg. at 64,719; see also *id.* at 64,676 ("By maintaining control over, and potential liability for, the recycling process, the generator ensures that the hazardous secondary materials are not discarded."). Distinguishing the "transfer-based" exclusion, EPA states that "there is, in general, less likelihood of generator control, and, hence, more likelihood of discard." *Id.* at 64,728.

responsibility on generators to ensure they manage their “wastes” properly.²³⁹ A facility may have the authority to control its materials and knowledge of the materials’ composition, but that also does not mean that the material is not a waste.

This logic also reflects an odd tautology. Generators face liability and responsibility as a result of the legal classification of the material; exclude a material from classification as a waste and they no longer have liability. Indeed, much of EPA’s logic and a rationale for proper management of recycled materials appears to arise from the threat of liability created by CERCLA.²⁴⁰ In effect, EPA’s logic relies on the threat of liability under CERCLA to justify excluding material as a waste under RCRA. As discussed below, that may be a valid justification for determining that regulation is unnecessary under Subtitle C; it is less compelling as a justification that a material subject to liability under other statutes is therefore not a waste under RCRA.²⁴¹ Thus, some combination of factors relating to the similarity of a recyclable material to a commercial product and the environmental risk of recycling underlie most of EPA’s justifications for its distinctions between solid wastes and other materials.

Although these factors may form a legitimate basis for regulating materials as solid waste under Subtitle C, EPA’s approach has serious flaws. First, the arguments have been used to justify, on a regulation-by-regulation basis, EPA’s treatment of different materials. In other words, they do not constitute a single, coherent statement of the criteria for identifying solid wastes. A patchwork can create a fine quilt, but it would make for a stronger set of regulations and greater judicial and public acceptance if there were a better common understanding of the scope of RCRA authority to regulate solid waste. A more coherent and easier to understand approach to regulating recyclable solid wastes would aid in implementation and judicial review.

Second, and more significantly, EPA’s ad hoc approach conflates the distinct issue of whether a material falls within the jurisdictional scope of RCRA and the quite separate issue of whether a recyclable solid waste should be regulated under Subtitle C. EPA has relied on environmental criteria to justify classification of a material as a waste that, for the most part, do not relate to the status of a material as a waste or product. Products can pose environmental risks; virgin products applied to the land can have the same environmental harms as recyclable materials. EPA has cleverly attempted to link improper management to the value of the product,²⁴² but environmental harms, standing alone, do not justify a distinction between wastes and products.

²³⁹ See Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6902(a)(5) (2000) (declaring RCRA objective of “requiring that hazardous waste be properly managed”).

²⁴⁰ EPA relies on the lack of environmental damage cases associated with on-site reclamation to justify its exclusion. The recycling study on which it relies indicates that it is the threat of CERCLA liability which promotes this proper management. See *infra* notes 260–61 and accompanying text.

²⁴¹ See *infra* notes 260–89 and accompanying text. See also *supra* notes 61–63 and accompanying text.

²⁴² See *supra* notes 231–32 and accompanying text.

B. Clarity

The EPA regulatory provisions are, to be blunt, poorly drafted. The structure and language of the regulations place barriers to effective implementation of RCRA. Consider the following:

Irrelevant Section 261.2(e) Exclusions. The matrix defines solid waste as most classes of secondary materials that are recycled by “use constituting disposal,” “burning/fuel,” “reclamation,” and “speculative accumulation.” OK, I get that. 40 C.F.R. § 261.2(e)(1), however, then provides an apparent exclusion for materials if they are recycled by use as products or ingredients without reclamation; section 261.2(e)(2) then prohibits that exclusion for materials recycled by use constituting disposal, burning/fuel, speculative accumulation or if they are inherently waste-like.²⁴³

But section 261.2(e) *literally* adds nothing. Since materials are only solid wastes if they are recycled in the ways specified in the matrix, the general exclusion for product/ingredients is superfluous; these materials were never defined as solid wastes in the first place. Furthermore, section 261.2(e) prohibits the “exemption” if materials are covered under the matrix or are “inherently waste-like.” Viola—section 261.2(e) only excludes from classification as a solid waste materials that were never defined as solid wastes. The elements of section 261.2(e) would make an interesting explanation of the application of the regulation, but it is terribly confusing when included as an unnecessary provision of the regulation.

Unnecessary Matrix. The matrix seems to be the heart of EPA’s coverage of recycled materials, but the matrix itself adds confusion without justification. EPA could, with less confusion, define as solid wastes “secondary materials that are recycled” and separately define the class of covered secondary materials and recycling activities. The *only* purpose of the matrix (and its asterisk designations) is to exclude reclaimed characteristic sludges, by-products, or both, and commercial chemical products that are reclaimed or speculatively accumulated (i.e., those are the only boxes in the matrix that don’t have an asterisk). The exclusion of these classes of materials could be accomplished with two lines of an exemption in section 261.4(b). If that were done, the matrix could go.

Separate Regulatory Exclusions for Solid Wastes and Hazardous Wastes. In 40 C.F.R. § 261.4, EPA has established two separate sets of exclusions: section 261.4(a) is an exclusion from classification as a solid waste; section 261.4(b) is an exclusion from classification as a hazardous waste.²⁴⁴ Either exclusion avoids application of the Subtitle C regulatory program, but the effect of these two provisions is to create some class of nonhazardous solid wastes for purposes of Subtitle C. There is, however, no regulatory significance in classifying a material as a nonhazardous solid waste under Subtitle C. EPA has accomplished with two distinct exclusion lists what it could have done with one.²⁴⁵

²⁴³ 40 C.F.R. § 261.2(e) (2008); *see supra* notes 103–05 and accompanying text.

²⁴⁴ 40 C.F.R. § 261.4(a)–(b) (2008); Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,760–64 (to be codified at 40 C.F.R. § 261.4(a)).

²⁴⁵ So why the two separate exclusions? One might think that exclusion from classification as a solid waste under 40 C.F.R. § 261.4(a) also generally excludes the material from classification as a solid waste for all purposes under RCRA, but that is not the case. EPA is quite clear that the statutory

Confusing Language Choices. EPA defines the category of “use constituting disposal” to include land application of waste.²⁴⁶ There are, however, many types of activities, including incineration, that constitute disposal under RCRA. By using what seems to be a general term to include only one specific type of disposal creates confusion EPA makes it more difficult to understand the scope of its regulation. Wouldn’t it make more sense to describe this recycling as “land application” rather than by using the term “use constituting disposal?”

Similarly, EPA uses the term “[i]nherently waste-like” to cover only a very few designated wastes.²⁴⁷ Every student who has ever worked with the regulation assumes that this provision covers a general category of waste-like material when in fact it simply applies to a limited class of specially designated wastes. There are simply less confusing word choices that would better describe these categories.

Obscure Location of Important Provisions. The issues of regulation of the recycling process and regulation of products produced from hazardous waste are obviously critical to the regulation of recycling. Both of the issues are addressed through the use of parenthetical phrases in subsections to regulations. The general exclusion of the recycling process is found at 40 C.F.R. § 261.6(c)(1) which states, parenthetically: “(The recycling process itself is exempt from regulation except as provided in § 261.6(d).)”²⁴⁸ The general exclusion of products produced from hazardous wastes is found in a parenthetical phrase in 40 C.F.R. § 261.3(c)(2)(i) which states: “(However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)”²⁴⁹ Good luck finding them.

Multiple Approaches to the Same Problem. In many cases, EPA wishes to establish reduced regulatory requirements for recycled hazardous wastes. That makes sense. But consider how many different ways EPA accomplishes this.

definition applies for purposes of determining application of liability under section 7003 of RCRA. *See* 73 Fed. Reg. at 64,671; OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, EPA, GUIDANCE ON THE USE OF SECTION 7003 OF RCRA 14 (1997), available at <http://www.epa.gov/compliance/resources/policies/cleanup/rcra/971020.pdf>. Therefore, the exclusion under 40 C.F.R. § 261.4(a) only has the effect of excluding a material from regulation under Subtitle C.

One might also think that the distinction between excluding a material under 40 C.F.R. § 261.4(a) and (b) might relate to the rationale of the exclusion: a material excluded from classification as a solid waste under section 261.4(a) would be based on arguments that the materials are not discarded while exclusion under section 261.4(b) would be based on arguments that the material, although discarded, need not be regulated as a hazardous waste. The only problem with this rationale is that it does not reflect EPA’s practice. EPA has argued that a material can be excluded from classification as a hazardous waste under 40 C.F.R. § 261.4(b) because it is not discarded. *See, e.g., Safe Food & Fertilizer*, 350 F.3d 1263, 1268–69 (D.C. Cir. 2003).

Therefore, the distinction made between 40 C.F.R. § 261.4(a) and (b) is simply irrelevant. EPA could accomplish the objective of removing materials from regulation under Subtitle C without creating the distinction between excluded hazardous wastes and excluded solid wastes. In other words, a regulation that combined section 261.4(a) and (b) into a single set of exclusions would have exactly the same regulatory effect as the current bifurcated approach to exclusions. Again, why add complexity without purpose?

²⁴⁶ 40 C.F.R. § 261.2(c)(1) (2008).

²⁴⁷ *Id.* § 262.2(d).

²⁴⁸ *Id.* § 261.6(c)(1).

²⁴⁹ *Id.* § 261.3(c)(2)(i).

- Section 261.6 purports to define the separate treatment of recyclable wastes, and it does contain some general requirements applicable to recyclable materials;²⁵⁰
- Conditional exclusion from classification as a solid waste at section 261.4(a);²⁵¹
- Conditional exclusion from classification as a hazardous solid waste at section 261.4(b);²⁵²
- Coverage in 40 C.F.R. Part 266 that contains, among other things, the detailed requirements for boilers and industrial furnaces and “use constituting disposal;”²⁵³
- Coverage under a new 40 C.F.R. Part 261, Subpart E—Exclusions and Exemptions.²⁵⁴

How, why and when EPA decides to employ one technique in preference to another is a matter of profound obscurity.

The new 2008 exclusions simply add to the confusion. The “under the control” exclusion is divided between the definition of solid waste in 40 C.F.R. § 261.2(a) and the conditional exclusions under 40 C.F.R. § 261.4(a).²⁵⁵ The detailed elements of the conditional exclusions are buried in sub-subsections to an otherwise long list of exclusions.²⁵⁶ The provisions further complicate the matrix by including new cross-referenced exemptions to the top line of the matrix. Readers who review the text and structure of the new rules may form their own views of their clarity.

C. Coverage

Concerns about bad drafting or incoherent rationale are real; they suggest that implementation, compliance, and enforcement are more costly and uncertain than necessary. Ultimately, however, the most significant question is whether EPA’s regulatory approach strikes a proper balance between the competing objectives of RCRA: encouragement of recycling as an alternative to disposal and proper environmental management of recyclable materials.

Regulation of recyclable materials as hazardous wastes under Subtitle C imposes costs, complexity, and “stigma” that act to minimize the extent to which materials are recycled. There is nothing inherently wrong with this; it is an

²⁵⁰ *Id.* § 261.6(a)(1).

²⁵¹ *Id.* § 261.4(a); Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,760–64 (Oct. 30, 2008) (to be codified at 40 C.F.R. § 261.4(a)).

²⁵² 40 C.F.R. § 261.4(b) (2008).

²⁵³ *Id.* § 266.102, .20(b).

²⁵⁴ *Id.* § 261.4; 73 Fed. Reg. at 64,760–64 (to be codified at 40 C.F.R. § 261.4(a)).

²⁵⁵ *See* 73 Fed. Reg. at 64,680.

²⁵⁶ The land-based “under the control” exclusion is number 23 on the list of exclusions. *Id.* at 64,760 (to be codified at 40 C.F.R. § 26.4(a)(23)). The “transfer-based” exclusion is the 24th exclusion on the list. *Id.* at 64,761 (to be codified at 40 C.F.R. § 26.4(a)(24)). The export exclusion comes in at number 25. *Id.* at 64,762 (to be codified at 40 C.F.R. § 26.4(a)(25)).

appropriate consequence if warranted by the potential environmental harm from recycling. But, given the environmental and economic advantages of “proper” recycling, it is appropriate to ask the extent to which EPA’s regulation of recyclable materials under Subtitle C actually furthers legitimate environmental objectives.

The environmental advantages of regulating hazardous materials that are recycled by land application or burning seem evident, but the environmental advantages of EPA’s regulation of reclamation under Subtitle C are less clear. EPA has since the initial promulgation of the Subtitle C regulations in the 1980’s essentially relinquished regulatory control once the materials enter the reclamation process.²⁵⁷ EPA also does not assert jurisdiction if wastes are directly reclaimed without storage at the reclamation facility.²⁵⁸ Hazardous wastes generated by the reclamation process itself have always been subject to regulation under Subtitle C.²⁵⁹ Thus, the primary environmental consequence of regulating these materials as hazardous waste involves control of their transportation and storage at an off-site facility prior to reclamation.

The problem of management of recyclable materials prior to reclamation is not a trivial concern, but it is unclear what additional level of environmental protection has been provided by EPA’s past classification of reclaimed materials as solid waste.²⁶⁰ This question is difficult to answer since the force that drives current management practices associated with recycling may be as much the potential for liability under CERCLA²⁶¹ as the regulatory requirements under RCRA.²⁶² The additional level of control arising from EPA’s existing Subtitle C requirements of reclamation has been important but it is narrow.

EPA’s efforts in the 2008 regulations to minimize the application of RCRA to reclaimed materials address a real issue: the proper balance between ensuring proper environmental control over recycling activities and imposing regulatory barriers that limit legitimate recycling. The appropriate balance may reflect policy judgments that are not subject to analytic certainty: the regulations are subject to criticism both for relaxing regulatory control over reclamation of hazardous materials and for imposing regulatory requirements over generators and third-parties who legitimately reclaim these materials.

²⁵⁷ See 40 C.F.R. § 261.6(a)(1) (1984).

²⁵⁸ See *supra* notes 118–19 and accompanying text.

²⁵⁹ Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6903(27) (2000) (defining the term “solid waste”).

²⁶⁰ In 2007, EPA performed what is, in effect, a “quick and dirty” assessment of environmental damage cases associated with recycling of hazardous secondary materials. See ENVIRONMENTAL PROBLEMS ASSESSMENT, *supra* note 135. The study identified 208 damage cases associated with recycling of which 40% arose from mismanagement of the recyclable materials themselves, 34% from mismanagement of residuals of the recycling process, 14% from abandonment of the recyclable materials, and 5% from fire or accident. *Id.* at 8. It is difficult to draw inferences from this limited data about the significance of the protections provided by EPA’s current regulatory approach. *Id.* at 9.

²⁶¹ See *id.* at 4.

²⁶² See *id.* See also OFFICE OF SOLID WASTE, EPA, AN ASSESSMENT OF GOOD CURRENT PRACTICES FOR RECYCLING OF HAZARDOUS SECONDARY MATERIALS 6 (2006), available at <http://www.regulations.gov/fdmspublic/component/main?main=DocumentDetail&d=EPA-HQ-RCRA-2002-0031-0354> [hereinafter GOOD PRACTICES ASSESSMENT] (EPA-HQ-RCRA-2002-0031-0354).

Even if one accepts the policy decisions reflected in EPA's treatment of reclaimed materials in the 2008 rule, it is hard to avoid the conclusion that EPA's general regulatory treatment of recyclable materials under RCRA is flawed.

VII. RETHINKING RECYCLING: A PROPOSED SCHEME

EPA is faced with a difficult task in developing a regulatory scheme for recyclable materials that both respects the jurisdictional limits of RCRA and balances RCRA's competing objectives of environmental protection and encouragement of recycling. There may be a better solution than the complex, confusing, and somewhat incoherent approach reflected in EPA's existing regulatory provisions.

There are several steps EPA needs to take to improve its approach to recycling under RCRA. First, EPA needs to establish a coherent basis for defining the scope of solid wastes under RCRA. This includes assertion of the broadest possible authority under RCRA's statutory definition of solid waste but a narrower and more targeted authority to define the regulatory class of Subtitle C based on a balance of RCRA's competing objectives and the environmental consequences of recycling. Second, based on these criteria, EPA should develop a regulatory definition of solid waste under Subtitle C that achieves the objective of appropriate environmental regulation of recyclable materials in a simpler, clearer, and more coherent fashion. Third, EPA needs to employ a fuller set of tools under RCRA and other statutes to ensure proper environmental management of recyclable wastes, even if they are not classified as hazardous wastes under Subtitle C.

A. The Jurisdictional Scope of RCRA

1. The Broad Scope of the Statutory Definition

Key to EPA's implementation of a comprehensive regulatory scheme for recyclable materials is establishing a broad interpretation of the scope of the statutory definition of solid waste. Establishing a broad scope to the statutory definition is critical for two reasons. A broad and coherent statement of the extent of its authority sets the stage for a narrower regulatory definition that can be tailored to address the multiple objectives of RCRA. In other words, once broad authority over solid waste is established, the regulatory definition can be based on factors, such as the environmental impact of recycling activities, to justify a tailored regulatory definition. Without an initial justification of a broad statutory definition, use of environmental factors makes little sense in defining what constitutes a solid waste and EPA gets trapped by its ad hoc assessment of "discard."

Further, a broad scope to the statutory definition of solid waste allows EPA to employ the reporting provisions of section 3013 and the liability provisions of section 7003 of RCRA without including the materials within the class of Subtitle

C hazardous wastes.²⁶³ This provides mechanisms to encourage the proper management of recyclable materials without the complexity and stigma associated with classification as hazardous wastes.

So what is the scope of authority under the statutory definition of solid waste? The existing case law suggests two simple (almost) principles. First, EPA may not regulate materials as solid wastes if they are still part of a continuous process within the generating industry itself. This principle involves what EPA has, in other contexts, called the “point of generation” issue: the point in an industrial process where waste is first generated. In other words, the statutory class of solid wastes cannot include industrial materials while they are still part of a continuous industrial process.

This is certainly the implication of both *AMC I* and *Ass’n of Battery Recyclers*. In *AMC I*, the court rejected EPA’s classification of certain petroleum refinery and mining materials as solid wastes.²⁶⁴ The petroleum materials at issue involved hydrocarbon fractions, including materials that had escaped from production vessels, which were reinserted into the petroleum refining process.²⁶⁵ The mining materials included ores and metal and mineral-bearing dusts that were reprocessed at various stages of the primary metal extraction process.²⁶⁶ All of these materials were solid wastes under EPA’s regulatory definition since they fell within the class of secondary materials that were being recycled; all of these wastes had the characteristic of being, in some sense, part of the ongoing process of petroleum refining and metal extraction.

The court concluded that EPA exceeded its authority in classifying these materials as “solid wastes.”²⁶⁷ Relying in large part on the plain meaning of the phrase “discarded material,” the court stated that “the ordinary, plain-English meaning of the word ‘discarded’ is ‘disposed of,’ ‘thrown away’ or ‘abandoned.’ Encompassing materials retained for immediate reuse within the scope of ‘discarded’ strains, to say the least, the everyday usage of that term.”²⁶⁸

Elsewhere the court stated that, given the objectives of RCRA: “EPA need not regulate ‘spent’ materials that are recycled and reused in an *ongoing* manufacturing or industrial process. These materials have not yet become part of the waste disposal problem; rather, *they are destined for beneficial reuse or recycling in a continuous process by the generating industry itself.*”²⁶⁹ Thus, the court concluded that “by regulating in-process secondary materials, EPA has acted in contravention of Congress’ intent.”²⁷⁰

This holding was confirmed in *Ass’n of Battery Recyclers v. EPA*.²⁷¹ In *Ass’n of Battery Recyclers*, the court addressed EPA’s assertion of authority over mining

²⁶³ See generally EPA, RCRA, SUPERFUND & EPCRA CALL CENTER TRAINING MODULE: INTRODUCTION TO DEFINITION OF SOLID WASTE AND HAZARDOUS WASTE RECYCLING (2001), available at <http://epa.gov/epawaste/inforesources/pubs/hotline/training/defsw.pdf>.

²⁶⁴ *AMC I*, 824 F.2d 1177, 1193 (D.C. Cir. 1987).

²⁶⁵ *Id.* at 1181.

²⁶⁶ *Id.*

²⁶⁷ *Id.* at 1193 n.26.

²⁶⁸ *Id.* at 1184.

²⁶⁹ *Id.* at 1186 (footnote omitted).

²⁷⁰ *Id.* at 1193.

²⁷¹ 208 F.3d 1047 (D.C. Cir. 2000).

wastes that were stored on-site on land without containment prior to insertion in the extraction process.²⁷² Notwithstanding *AMC I*, EPA claimed authority to regulate these materials as waste since, according to EPA, the act of storage, no matter how short, indicated that they were not subject to “immediate reuse” within the generating industry.²⁷³ The court rejected this view and held that the materials, even if stored in a manner that created environmental risks, could not be classified as a solid waste if “destined for reuse as part of a continuous industrial process.”²⁷⁴

If materials may not be a statutory solid waste until their initial “point of generation,” the case law also suggests the second point: once generated, a material may be a statutory solid waste regardless of any subsequent act of recycling. In other words, materials that are recycled, even if they have market value, may fall within the statutory classification of solid wastes.²⁷⁵ The D.C. Circuit has recognized EPA’s broad authority to classify recyclable materials as solid waste. In *American Petroleum Institute v. EPA*,²⁷⁶ the court, for example, held that certain hazardous slag sent for reclamation could be classified as a solid waste.²⁷⁷ In *American Mining Congress v. EPA (AMC II)*,²⁷⁸ the court held that metal bearing sludges could be classified as solid waste even though they might be recycled sometime in the future.²⁷⁹ Even the court in *AMC I* acknowledged that materials

²⁷² *Id.* The case involved a challenge to EPA regulations establishing a “conditional exclusion” for reclaimed mineral processing secondary materials. *Id.* at 1051. Under the regulations, the materials were excluded from classification as a solid waste if stored prior to reclamation in tanks, containers, buildings, or properly maintained pads; in contrast, secondary materials that did not satisfy the storage requirements prior to reclamation would be classified as solid wastes. *Id.* Based on its assessment of the case law, EPA claimed authority to regulate secondary materials that are recycled within an industry if there is any storage, such as placement on the ground, that creates the risk of environmental problems. *Id.*; see Land Disposal Restrictions Phase IV: Final Rule Promulgating Treatment Standards for Metal Wastes and Mineral Processing Wastes; Mineral Processing Secondary Materials and Bevill Exclusion Issues; Treatment Standards for Hazardous Soils, and Exclusion of Recycled Wood Preserving Wastewaters, 63 Fed. Reg. 28,556, 28,579–82 (May 26, 1998) (to be codified at 40 C.F.R. pts. 148, 261, 268, 271).

²⁷³ See *Ass’n of Battery Recyclers*, 208 F.3d at 1052.

²⁷⁴ *Id.* at 1056. The court did not resolve the issue of the point at which stored materials are no longer part of a “continuous industrial process,” but it did reject EPA’s claim that any act of storage justified classifying a material as a solid waste. See *id.* at 1052–53, 1056.

²⁷⁵ The court recognized this principle in *United States v. ILCO, Inc.*, 996 F.2d 1126 (11th Cir. 1993), which stated:

It is unnecessary to read into the word “discarded” a congressional intent that the waste in question must finally and forever be discarded, as ILCO seems to argue. It is perfectly reasonable for EPA to assume Congress meant “discarded once.” Were we to rule otherwise, waste such as these batteries would arguably be exempt from regulation under RCRA merely because they are potentially recyclable. Previously discarded solid waste, although it may at some point be recycled, nonetheless remains solid waste.

Id. at 1132. See also *Owen Elec. Steel Co. v. Browner*, 37 F.3d 146, 150 (4th Cir. 1994) (citing *United States v. ILCO* and coming to a similar conclusion).

²⁷⁶ 906 F.2d 729 (D.C. Cir. 1990).

²⁷⁷ *Id.* at 740. The case involved an application of certain RCRA requirements to the waste generated from the reclamation of the sludges. See *id.* at 732. As a result of the court’s conclusion, the wastes generated from the hazardous slag would be a hazardous waste under EPA’s derived-from rule.

²⁷⁸ 907 F.2d 1179 (D.C. Cir. 1990).

²⁷⁹ According to the court in *Ass’n of Battery Recyclers*: “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

that were no longer part of a continuous process in the generating industry may be solid wastes even if subsequently recycled.²⁸⁰

These two aspects of the statutory classification of solid waste were recognized by the D.C. Circuit in *Safe Food & Fertilizer v. EPA*.²⁸¹ The court stated:

We have held that the term “discarded” cannot encompass materials that “are destined for beneficial reuse or recycling in a continuous process by the generating industry itself.” We have also held that materials destined for future recycling by another industry *may* be considered “discarded”; the statutory definition does not preclude application of RCRA to such materials if they can reasonably be considered part of the waste disposal problem.²⁸²

These principles allow a broad definition of solid waste that includes recyclable materials that are no longer part of a continuous industrial process.²⁸³

Under EPA’s existing terminology, solid wastes could thus be defined to include anything that is “abandoned” or is a “by-product” of an industrial process. These “by-products” would include materials that were:

- not intentionally produced for sale to the public, and
- no longer employed to make the primary product of the industrial process.

This definition would limit the class of statutory solid wastes to materials that are no longer part of a continuous industrial process consistent with the D.C. Circuit’s holdings in *AMC I* and *Ass’n of Battery Recyclers*. This criterion would be satisfied if a material is no longer employed in producing the primary product of the industrial process.²⁸⁴

even if it might be reclaimed and reused at some future time.” *Ass’n of Battery Recyclers*, 208 F.3d at 1056 (footnote omitted).

²⁸⁰ The court, for example, discussing the provisions of RCRA that allowed EPA to regulate the recycling of used oil, stated:

Section 6935 addresses “used oil” collected by and utilized in the “oil recycling industry.” Oil recyclers typically collect discarded used oils, distill them, and sell the resulting material for use as fuel in boilers. Regulation of those activities is likewise consistent with an everyday reading of the term “discarded.” It is only when EPA attempts to extend the scope of that provision to include the recycling of *undiscarded* oils at petroleum refineries that conflict occurs.

AMC I, 824 F.2d 1177, 1187 n.14 (D.C. Cir. 1987). Thus, the court’s opinion suggests that recycled materials, if no longer part of a continuous process of the generating industry, can be classified as discarded wastes.

²⁸¹ 350 F.3d 1263 (D.C. Cir. 2003).

²⁸² *Id.* at 1268 (citations omitted).

²⁸³ The D.C. Circuit cases suggest that recyclable materials must, in some sense, become part of the “waste disposal problem” before they may be treated as solid wastes. From the point of view of the original generator, the subsequent management of industrial by-products makes little difference in whether they have been discarded. As discussed below, the issue of whether a recyclable material constitutes a part of the “waste disposal problem” is more appropriately considered in determining whether an industrial by-product should be included within the class of regulatory solid wastes subject to the Subtitle C program.

²⁸⁴ As noted, EPA’s 2008 regulation contains a mechanism for obtaining a determination that a material is not a waste because it is part of a “continuous industrial process.” Revisions to the Definition

Further, this broad statutory definition of solid waste is consistent with common meanings of the word “discard.” In definitions that include such defining phrases as “cast away” or “get rid of,” the focus is on the intent of the original generator to relinquish an unwanted thing. One can discard an unwanted item even if it has value to others. One “discards an old hat” even if the hat has value to someone else; one discards an item by sending it to a consignment store, even if it will be resold at value to someone else. The phrase “one person’s trash is another person’s treasure” captures the common sense view that the concept of waste can legitimately be viewed from the perspective of the original generator.

2. *The Narrower Scope of the Regulatory Definition*

Although the statutory definition of “solid waste” may include all recycled by-products, EPA need not extend Subtitle C regulatory requirements to all of these wastes. Under its “dual definition” approach, EPA has consistently acknowledged that its regulatory definition of solid waste constitutes a subset of the broader class of statutory solid wastes. Courts have confirmed this broader scope of the statutory class of solid wastes.²⁸⁵ In *Safe Food & Fertilizer*, the D.C. Circuit recognized that EPA may, *but need not*, regulate all statutory solid wastes under Subtitle C.²⁸⁶

So what are the appropriate criteria for defining the more limited class of Subtitle C solid waste? The first answer comes from RCRA itself. RCRA identifies potentially conflicting objectives of both proper management of hazardous wastes and promotion of recycling,²⁸⁷ and resolution of this potential conflict requires an exercise of judgment by EPA. Indeed, EPA has express authority to develop regulations that define hazardous wastes that “should be subject” to the provisions of Subtitle C.²⁸⁸ Thus, EPA should have authority to exclude recyclables from coverage under Subtitle C based on a rational balance of these objectives.

A second answer comes from the case law. The D.C. Circuit, in a series of cases, has identified the issue of whether a material is part of the “waste disposal problem” as relevant in determining whether a material can be classified as a solid waste under Subtitle C.²⁸⁹ In *Safe Food & Fertilizer*, for example, the court upheld EPA’s exclusion of certain wastes from coverage under Subtitle C based on EPA’s conclusion that market forces would minimize the risk of improper management and that the environmental harm from use of recyclable materials was no greater than the use of virgin materials.²⁹⁰ In other words, EPA could justify exclusion of

of Solid Waste, 73 Fed. Reg. 64,668, 64,758 (Oct. 30, 2008) (to be codified at 40 C.F.R. § 260.34(b)). The criteria for this nonwaste determination seem to have less to do with whether a material is being employed in a continuous industrial process than in assessing the environmental consequences of management of the materials. *See supra* note 208 and accompanying text. Whatever criteria are used to define the first point at which a material becomes a waste, it is this “point of generation” issue that should be used to resolve the class of materials that can be classified as a solid waste under RCRA.

²⁸⁵ *See supra* note 73 and accompanying text.

²⁸⁶ *Safe Food & Fertilizer*, 350 F.3d at 1268.

²⁸⁷ *Supra* notes 66–69 and accompanying text.

²⁸⁸ Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6921(a) (2000).

²⁸⁹ *Am. Petroleum Inst. v. EPA*, 906 F.2d 729, 740–41 (D.C. Cir. 1990); *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1186–87 (D.C. Cir. 1990); *Safe Food & Fertilizer*, 350 F.3d at 1268.

²⁹⁰ *Safe Food & Fertilizer*, 350 F.3d at 1269.

recyclable materials from coverage under Subtitle C based on its assessment of the environmental harms associated with recycling.

Both the statutory provisions of RCRA and the case law thus indicate that EPA can reasonably define the subset of Subtitle C solid wastes based on an assessment of the environmental adequacy of recycling practices and the potential impact of Subtitle C regulation on recycling activity. Therefore, in defining the class of recyclable materials subject to regulation as hazardous wastes under Subtitle C, EPA would be guided, not by a justification based on whether the material is “discarded,” but by the environmental harm from the recycling activity itself, the risk of environmental harm from the management of the recyclable materials prior to recycling, the impact on recycling activity arising from classification of a recyclable material as a hazardous waste, the existence of other regulatory programs that encourage proper management of recyclable materials, and the advantages to implementation, public acceptance and judicial review associated with a simpler and more coherent regulatory program.

B. A Revised Regulatory Definition of Solid Waste

To the extent that the regulatory definition of solid waste involves a balancing of complex factors, there is no one correct answer, no one correct definition. Nonetheless, the criteria for including recyclable materials as hazardous solid wastes suggest the following resolution. First, materials that are recycled through activities involving land application or burning of wastes should be classified as solid wastes and subject to Subtitle C regulation. This type of recycling involves the same environmental harms as direct disposal of hazardous wastes.

Second, EPA should classify all materials involved in “sham” recycling as solid wastes. Sham recycling is, in effect, a surrogate for abandonment of hazardous wastes that produces environmental harm without the advantages of “proper” recycling identified as an objective of RCRA. Recyclable materials employed in legitimate recycling, with the exception of recycling through land application or burning, would be excluded from regulation under Subtitle C of RCRA.

Regulating only “sham recycling” under Subtitle C would substantially simplify the regulatory definition without compromising environmental protection. As discussed below, EPA, through use of “presumptions” and “safe harbor” provisions associated with the regulation of “sham recycling,” could provide significant regulatory incentives to proper management of recyclable materials. Further, EPA could ensure significant financial incentives for proper management of unregulated recyclable materials through effective use of the liability and reporting elements of RCRA that are applicable to the broader class of statutory solid wastes.

Such an approach could produce the following simplified regulatory definition of solid waste:

A solid waste for purposes of Subtitle C means any material that is:

1. abandoned;
2. a by-product that is recycled through

- a. land application or burning, or
 - b. sham recycling; or
3. a designated solid waste.

This definition, although requiring further explanation, on its face suggests a coherent and intuitively obvious scope of materials to be included as regulated solid wastes under Subtitle C.

1. Abandoned Materials

The definition of “abandoned” would be similar to the definition in the existing regulation.²⁹¹ It is intended to include any wastes that are abandoned without a demonstrable intention to reuse or recycle. The only addition would be to include “speculative accumulation.” “Speculative accumulation” includes storage of materials for subsequent recycling but without use of the materials within a defined period of time. Such storage without use constitutes an obvious subterfuge for disposal that fits neatly within the concept of abandonment.

2. Recycling of Byproducts through Land Application or Burning

EPA currently regulates materials as hazardous waste that are recycled through use constituting disposal or burning for fuel,²⁹² and this provision would largely continue EPA’s current regulatory scheme. A requirement that the materials first be by-products would bring them within the scope of RCRA regulatory authority and the environmental concerns associated with this type of recycling justifies inclusion within the Subtitle C program. Subtitle C regulation of these particular recycling practices is particularly appropriate given the special environmental problems associated with recycling of hazardous materials by land application or burning and the close relationship between these recycling activities and regulated disposal practices.²⁹³

3. Recycling of Byproducts through Sham Recycling

By-products that are employed in “sham” recycling also intuitively fall within the class of solid wastes subject to regulation under Subtitle C. Indeed Congress has indicated that the purpose of RCRA is to encourage only “properly conducted recycling.”²⁹⁴ Reliance on the concept of sham recycling, however, raises serious implementation and enforcement issues.

To implement this concept properly, EPA should take three steps. First, it should include, within the regulation itself, a definition of “sham recycling” that identifies the relevant criteria for making the distinction. Second, it should establish

²⁹¹ See 40 C.F.R. § 261.2(b) (2008).

²⁹² *Id.* § 261.2(c).

²⁹³ RCRA, of course, contains its own specific requirements associated with the use of hazardous wastes as fuels and specifically authorizes the classification of certain petroleum materials as wastes if they are used to produce fuels. 42 U.S.C. § 6924(q) (2000).

²⁹⁴ *Id.* § 6902(a)(6).

a presumption that recycling of by-products is a sham and it should place the burden of proof on the generator to establish that the recyclable materials were used in legitimate recycling. Third, EPA should establish a regulatory “safe harbor,” a set of conditions which, if met, will conclusively establish that the recycling is legitimate.

Legitimacy Criteria. EPA through a series of policy statements and its new “legitimacy criteria” has attempted to define the characteristics that distinguish legitimate from “sham” recycling.²⁹⁵ Under the current regulatory approach, the distinction between legitimate and sham recycling has several consequences.²⁹⁶ First, persons who engage in “sham recycling” are presumably engaged in the act of “abandonment” that would result in classification of the materials as a solid waste. Second, since EPA largely exempts recycling operations from permitting requirements under Subtitle C applicable to “treatment, storage and disposal facilities,” classification of an activity as “sham recycling” would result in treatment of the facility as a regulated TSDF that requires a RCRA permit. Third, the 2008 regulatory exclusions and the nonwaste determinations require that the reclamation activities meet the legitimacy criteria.

The set of “legitimacy criteria” promulgated in the 2008 regulation represent a reasonable effort to codify criteria for distinguishing legitimate from “sham” recycling and include a variety of elements. First, the hazardous secondary material must provide “a useful contribution to the recycling process or to product of the recycling process.”²⁹⁷ This “contribution” factor obviously addresses the question of whether the recyclable material is actually be used for its intrinsic value as a commodity or is simply being included in a product as a surrogate for disposal. Second, the recycling process must yield a valuable product or intermediate.²⁹⁸ This “product” factor also seems a central requirement of any legitimate recycling program.

EPA also has identified several additional criteria that must be “considered” as part of determining whether recycling is legitimate.²⁹⁹ The first of these consideration factors is whether the product of the recycling process contains significant amounts of hazardous constituents that are not found in the analogous products or the product exhibits a hazardous characteristic not exhibited by the analogous product.³⁰⁰ This criterion addresses EPA’s long standing concern that hazardous constituents in recyclable material, constituents that do not themselves add to the recycling process, would escape regulation if the recyclable materials and product of recycling were exempt from regulation. EPA has described this

²⁹⁵ See *supra* notes 108–15 and accompanying text; Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558 (proposed Oct. 28, 2003) (to be codified at 40 C.F.R. pts. 260–61); Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172, 14,199 (proposed Mar. 26, 2007) (to be codified at 40 C.F.R. pts. 260–61).

²⁹⁶ Under the existing regulatory definition, secondary materials that are recycled, as defined through the matrix, are per se classified as solid wastes; the concept of legitimate or sham recycling is irrelevant.

²⁹⁷ 72 Fed. Reg. at 14,198–99; 68 Fed. Reg. at 61,583–85.

²⁹⁸ 72 Fed. Reg. at 14,198; 68 Fed. Reg. at 61,583, 61,585–86.

²⁹⁹ Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,759–60 (Oct. 30, 2008) (to be codified at 40 C.F.R. § 260.43).

³⁰⁰ *Id.* at 64, 759; 72 Fed. Reg. at 14,198–99; 68 Fed. Reg. at 61,583, 61,586–87.

situation as a “toxics along for the ride” or TAR.³⁰¹ The other consideration criterion proposed by EPA requires an assessment of whether the recyclable material is being managed as a valuable product or intermediate.³⁰² This “management” criterion addresses whether the recyclable material has actual commercial value by identification of whether the recycler and the generator manage the material in a way which minimizes its loss.³⁰³

These “legitimacy” criteria reflect a rational attempt to identify those recycling practices and products that should be included within the scope of Subtitle C. Each of the criteria are relevant in determining whether a material is actually being recycled due to its intrinsic value to the process or whether the act of recycling is in fact a sham to disguise an intent to dispose of the materials. Additionally, the TAR and management criteria focus on environmental justifications for regulating certain types of recycling activities under Subtitle C. As discussed above, the broad authority to regulate all recycling activity under RCRA justifies EPA in relying on environmental factors in determining the class of activities it will regulate under Subtitle C.³⁰⁴

The problem is not in identifying the factors that should be relevant in determining which type of recycling practices should be regulated as “sham” recycling under Subtitle C. The problem is in developing a regulatory scheme that gives proper guidance and certainty that both allows EPA effectively to police the system and provides the regulated community with certainty to determine whether a proposed recycling practice is regulated under Subtitle C.

Given the enormous variety of possible forms of recycling within the economy, the issue of clarity and certainty of EPA regulations creates difficult problems. A general requirement that generators “consider” factors and make their own determination, and thereby run the risk of EPA reaching a different conclusion, would place real obstacles to recycling. A requirement that EPA approve any proposed recycling activity would simply be administratively impractical. There are, however, implementation provisions that would make use of legitimacy criteria more effective.

Presumptions and Burdens. EPA should establish a regulatory presumption that all recycling is sham and place the burden of proof on the generator and recycler to justify that their activities satisfy the legitimacy criteria. This would obviously simplify EPA’s enforcement efforts and require that the generator take steps to ensure that it has properly considered and documented its assessment of the recyclable materials and the recycler.

³⁰¹ 72 Fed. Reg. at 14,199; 68 Fed. Reg. at 61,586. The TAR criterion thus addresses the concern that recycling would be a surrogate for disposal of toxics constituents. Since recycling practices that involve land application or burning of the product of recycling would be regulated under Subtitle C whether legitimate or sham, this criterion addresses concerns for other types of products where, presumably, the superfluous hazardous constituents would pose an environmental harm. The significance of this criterion is also mitigated by the fact that the recyclable material must separately satisfy the criterion that it make an actual “contribution” to the recycling process or product to be legitimate.

³⁰² 72 Fed. Reg. at 14,198–99; 68 Fed. Reg. at 61,583–84.

³⁰³ 72 Fed. Reg. at 14,199; 68 Fed. Reg. at 61,583.

³⁰⁴ See *supra* Part III.A.

EPA currently places the burden on the regulated community to establish that recyclable materials are exempt from regulation under Subtitle C. This is expressly provided in 40 C.F.R. § 261.2(f). Thus, this would not be a change in approach. Placement of the burden on the regulated community also makes conceptual sense. If all recyclable materials are potentially subject to regulation as solid waste, a regulatory definition that excludes legitimate recycling is, in effect, a conditional exclusion. It is no stretch to place the burden of establishing such an exclusion on the party making the claim. Further, it is the generators and recyclers that have the information about the recyclable materials and the recycling process that is necessary to evaluate the criteria. Placing the burden on the party with the relevant information also makes sense.

Safe Harbor. Although it would simplify enforcement to place the burden on the regulated community to justify a recycling practice as legitimate, such a presumption undercuts the certainty needed to effectively encourage proper recycling. To provide this certainty, EPA should establish a set of “safe harbor” provisions that, if met, will assure that a generator or recycler has met their burden. These safe harbor provisions would not be mandatory; generators and recyclers would still have the option to meet their burden of establishing their activities were legitimate. But a set of stringent “safe harbor” provisions could be used to encourage generators and recyclers to take steps to assure that recycling is legitimate and conducted in an environmentally sound manner. Such safe harbor provisions might include the following:

Compliance with the Superfund Recycling Equity Act Criteria. In 1999, Congress adopted the Superfund Recycling Equity Act that amended the Comprehensive Environmental Response, Compensation, and Liability Act to provide an exemption from liability for generators who arranged for the recycling of certain classes of recyclable materials.³⁰⁵ The Act, among other things, confirmed Congress’s intent to remove obstacles to legitimate recycling of potentially hazardous materials.

CERCLA, in section 127, now specifies certain criteria that must be satisfied in order to establish the exemption from liability for recycling.³⁰⁶ These include a focus on the existence of a market for recycling and the suitability of the recyclable materials for recycling.³⁰⁷ The statute also provides that an entity is not eligible for the exclusion if it had an “objectively reasonable basis” to believe that the material would not be recycled, hazardous substances had been added to the recyclable materials for purposes other than recycling, and failed to exercise “reasonable care”

³⁰⁵ Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9627 (2000). The exemption applies to recycling of certain types of scrap paper, glass, plastic, and metal, and certain types of spent batteries. *Id.* § 9627(b). *See generally* GABA & STEVER, *supra* note 21, at § 7:7.

³⁰⁶ *See* 42 U.S.C. § 9627(c)–(e) (2000).

³⁰⁷ These criteria include, among others, “that the recyclable material met a commercial specification grade,” “a market existed for the recyclable material,” “a substantial portion of the recyclable material was made available for use as feedstock for the manufacture of a new saleable product,” and “the recyclable material could have been a replacement or substitute for a virgin raw material, or the product to be made from the recyclable material could have been a replacement or substitute for a product made, in whole or in part, from a virgin raw material.” *Id.* § 9627(c).

in managing and handling the recyclable material.³⁰⁸ Satisfaction of these criteria for recyclable materials might be a basis for establishing a “safe harbor” under RCRA that the transaction involved legitimate recycling.

Financial Assurance. Indication that a facility has an economic incentive to manage recyclable materials properly is relevant to assessment of the legitimacy of recycling. Some form of financial assurance, such as insurance or bonding, indicating that the facility has sufficient financial resources to deal with any releases of hazardous materials would be relevant in determining that the facility was engaged in legitimate recycling. This criterion would be particularly important given the threat that undercapitalized recycling activities would not respond to the potential for liability. EPA has promulgated a mandatory financial assurance obligation for third-party reclaimers as part of its “transfer-based” exclusion.³⁰⁹ These financial assurance requirements would constitute an appropriate standard for judging the legitimacy of the reclamation activity.

Formal Due Diligence of the Recycling Facility. Another “safe harbor” element might include a formal environmental audit or due diligence review of the recycling facility by the generator of the recyclable materials. Such a due diligence review would include, at a minimum, an assessment of the regulatory compliance status of the recycling facility, its environmental management practices, and the existence of any financial assurance mechanism to address any potential releases associated with the process. EPA, in its new “transfer-based” exclusion, has established a set of “audit” questions that must be answered (and documented) by generators.³¹⁰ These criteria would not be regulatory requirements for the recycling facility, but compliance with the criteria, confirmed through a due diligence review of the facility or other form of certification, could be used to establish the legitimacy of the recycling.

Private Certification of the Recycling Facility. ASTM International has established standards for the conduct of “due diligence” reviews that satisfy the “all appropriate inquiry” requirements of CERCLA.³¹¹ Similarly, such a private certification standard might be developed to document compliance with the legitimate recycling requirement.

EPA has promulgated several of these factors as mandatory prerequisites for satisfying its “transfer-based” reclamation exclusion.³¹² This Article suggests that satisfaction of these factors not be mandatory; rather they would be strongly encouraged by providing a legal defense to liability if satisfied. Given the complexity of recycling activities and arrangements, this approach, together with the liability and enforcement policies discussed below, would establish strong incentives for proper supervision of reclamation activities by generators without imposing inflexible regulatory obligations on recycling activities.

³⁰⁸ *Id.* § 9627(f).

³⁰⁹ Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,761–62, 64,764–88 (Oct. 30, 2008) (to be codified at 40 C.F.R. §§ 261.4(a)(24)(vi)(F), 261.140–.151). *See supra* notes 182–84 and accompanying text.

³¹⁰ 73 Fed. Reg. at 64,761 (to be codified at 40 C.F.R. § 261.4(24)(v)(B)).

³¹¹ Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,081 (Nov. 1, 2005) (“[R]eferencing the standards and practices developed by ASTM International and known as Standard E1527–05 . . .”).

³¹² 73 Fed. Reg. at 64,761 (to be codified at 40 C.F.R. § 261.4(24)(v)(B)).

4. Designated Solid Wastes

EPA currently, through its identification of “inherently waste-like” materials and its treatment of military munitions, provides special treatment of a limited group of materials.³¹³ EPA could continue this special treatment if warranted by creation of a separate category of designated solid wastes. It is far from clear, however, whether the materials included within the category of “inherently waste-like” need separate categorical treatment.³¹⁴ A special category of “designated solid wastes” would be appropriate for all byproducts that are exported for recycling or for other materials, such as military munitions, that raise special concerns.

C. Liability and Enforcement Policies

In a recent EPA study, industrial sources indicated that threat of liability for cleanup costs under CERCLA was of “primary importance” in influencing their management of hazardous materials.³¹⁵ It has been the possibility of CERCLA liability that has led many companies to establish voluntary “audit policies.”³¹⁶

This raises the obvious point that the threat of liability, even in the absence of regulatory obligations, can significantly affect the management of hazardous materials. For those legitimate recycling activities exempt from regulation, the possibility of liability on generators for improper management by the recycling facility can serve as an additional mechanism for ensuring that recycling is conducted in an environmentally sound manner and that any third-party recycler has sufficient financial resources to address releases. Assurance of an EPA response will create self-implementing incentives on the regulated community to properly manage their handling of hazardous recyclable materials.

To be effective, however, the threat of liability on the generator must be credible. Therefore, EPA should establish through an express enforcement policy its intention to seek imposition of liability not only on the owners and operators of recycling facilities where there is a release of solid or hazardous wastes, but also from all generators who sent recyclable materials to that site. To encourage proper action by generators, EPA should link this enforcement policy to satisfaction of the “safe harbor” provisions. In other words, only generators who undertake appropriate due diligence or assessment of the financial status of the recycler will be assured that they will not be the subject of a liability action.

EPA has tools under both CERCLA and RCRA to impose liability on both the generators of recyclable materials and the recycling facilities themselves. Under CERCLA, the owners and operators of facilities where there is a release of hazardous substances are subject both to government and private cost recovery actions and to government administrative orders.³¹⁷ Additionally, persons who

³¹³ See 40 C.F.R. § 261.2 (2008); 73 Fed. Reg. at 64,760 (to be codified at 40 C.F.R. § 261.2).

³¹⁴ EPA’s criteria for designating material as “inherently waste-like” generally track the criteria used to establish “sham recycling.” Thus, these materials would generally be classified as solid waste under the sham recycling provision without separate designation as inherently waste-like.

³¹⁵ GOOD PRACTICES ASSESSMENT, *supra* note 261, at 6.

³¹⁶ *Id.* at 7.

³¹⁷ See Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9606(a), 9607(a) (2000).

“arranged for disposal” of hazardous substances at a site may also be liable unless eligible for an exemption by satisfying the “recycling activities” exemption in section 127 of CERCLA.³¹⁸

RCRA has its own mechanism for imposing liability for the cleanup of solid wastes.³¹⁹ Under section 7003, the government may seek injunctive relief against a broad class of generators and disposers who have caused or contributed to an imminent and substantial endangerment from a solid or hazardous waste.³²⁰ Private parties have similar authority under section 7002 to seek injunctive relief against the same parties.³²¹

Liability under sections 7003 and 7002 is broad. First, although liability requires a showing of “imminent and substantial endangerment,”³²² courts have established a relatively lenient standard for such a showing. In other words, the endangerment need neither be very imminent nor very substantial; the key is that the existence of the solid waste creates a risk of harm.³²³ Second, liability under sections 7003 and 7002 apply to both hazardous waste and nonhazardous solid waste, and EPA has expressly stated that its authority under section 7003 extends to materials that are solid wastes under the statutory definition of solid waste in RCRA even if they do not meet the regulatory definition.³²⁴ Although this regulation is expressly limited to the government’s authority under section 7003, courts have uniformly held that citizen suits under section 7002(a)(1)(B) may be brought for releases of material that meet the statutory definition of “solid waste.”³²⁵ Thus, any generator, transporter, or owner/operator of a facility from which there is a release of a statutory solid waste may be liable under sections 7002 and 7003 even if that material is not a hazardous waste under the RCRA Subtitle C regulatory program.

³¹⁸ See *supra* notes 304–07.

³¹⁹ Facilities subject to RCRA permitting may also be required to undertake “corrective action” pursuant to section 3004(u) and 3008(h). Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6924, 6930 (2000).

³²⁰ *Id.* § 6973(a).

³²¹ *Id.* § 6972(a)(1)(B). See generally GABA & STEVER, *supra* note 21, at § 3:45–:58 for a discussion of the elements of liability under 42 U.S.C. § 6972(a)(1)(B).

³²² See 42 U.S.C. §§ 6972(a)(1)(B), 6973(a) (2000).

³²³ See, e.g., *Interfaith Cmty. Org. v. Honeywell Int’l, Inc.*, 399 F.3d 248, 258 (3d Cir. 2005) (plaintiff must only show that there is “a potential” for imminent harm, and an endangerment is substantial if it is “serious”); *Parker v. Scrap Metal Processors, Inc.*, 386 F.3d 993, 1015 (11th Cir. 2004) (endangerment does not require proof of actual harm); *Cox v. City of Dallas*, 256 F.3d 281, 300 (5th Cir. 2001) (an endangerment is substantial if it is “serious”); *Dague v. City of Burlington*, 935 F.2d 1343, 1355 (2d Cir. 1991) (language of RCRA intended to grant equitable relief “to the extent necessary to eliminate any risk posed by toxic wastes”); *United States v. Waste Indus., Inc.*, 734 F.2d 159, 165 (4th Cir. 1984) (a more lenient standard of threatened harm is allowed under section 7003); *Zands v. Nelson*, 797 F. Supp. 805, 809 (S.D. Cal. 1992) (imminent hazard may be declared at any point in chain of events which may ultimately result in harm to the public).

³²⁴ 40 C.F.R. § 261.1(b)(2) (2008).

³²⁵ See, e.g., *Conn. Coastal Fishermen’s Ass’n v. Remington Arms Co.*, 989 F.2d 1305 (2d Cir. 1993) (lead shot and clay targets from a firing range that entered Long Island Sound are solid waste); *Comite Pro Rescate de la Salud v. Puerto Rico Aqueduct & Sewer Auth.*, 888 F.2d 180 (1st Cir. 1989) (solid industrial waste mixed with sewage from domestic sources is solid waste); *Craig Lyle Ltd. P’ship v. Land O’Lakes*, 877 F. Supp. 476 (D. Minn. 1995) (petroleum leaked from underground storage tanks is solid waste).

Liability under both CERCLA and RCRA may almost certainly be imposed on the owners and operators of facilities engaged in recycling itself. Liability under both CERCLA and RCRA may also be imposed against persons who arranged for disposal or recycling of materials at an off-site facility, but such liability may require a demonstration that the materials sent for recycling satisfy the statutory definition of solid waste under RCRA.³²⁶ By establishing a broad statutory definition of solid waste to include all industrial by-products, EPA can simplify the elements necessary to establish liability on the generators of recyclable materials.

D. Reporting Requirements

A final element of an effective scheme for management of recyclable materials is a mechanism to obtain information about recycling practices and to identify those facilities engaged in legitimate recycling where there may be a threat of release of hazardous substances. For those recycling activities subject to regulation under Subtitle C, existing reporting requirements applicable to generators of hazardous wastes and to TSDFs will generate such information.³²⁷

For activities involving legitimate recycling, neither the generator nor the recycling facility itself may be subject to Subtitle C requirements. EPA, however, has alternative authorities under RCRA that will allow it to require reporting by facilities engaged in the recycling of materials that are classified as hazardous wastes under Subtitle C. Section 3007 of RCRA gives EPA authority to engage in inspections and require reporting by persons engaged in management of the statutory class of hazardous wastes.³²⁸ EPA has claimed that it may use this authority to impose reporting requirements on persons who manage materials that are conditionally exempt from regulatory classification as a hazardous waste.³²⁹ Thus, EPA may have the authority to require recycling facilities to provide notice of their activities even those engaged in what would be classified as legitimate recycling that is not regulated under Subtitle C. EPA would also have authority under section 3007 to conduct inspections of such facilities.

This information would be useful to the government in evaluating its regulatory program and to properly implement a liability program. It would also be useful as a tool under a “safe harbor” provision that would provide incentives to generators to deal only with facilities that have provided such notice.

³²⁶ See 42 U.S.C. § 6903(27) (2000) (defining “solid waste” in relevant part 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, and from community activities”).

³²⁷ See, e.g., 40 C.F.R. §§ 264.72–.77 (2008) (listing of reporting and recordkeeping requirements applicable to permitted RCRA facilities).

³²⁸ 42 U.S.C. § 6927 (2000)

³²⁹ See Hazardous Waste Identification Rule; Definition of Hazardous Wastes, 64 Fed. Reg. 63,382, 63,407 (proposed Nov. 19, 1999) (containing discussion of proposed reporting requirements under RCRA sections 3007 and 2002 for persons managing conditionally exempt wastes under a proposed HWIR rule).

VIII. CONCLUSION

EPA's regulatory approach to recyclable materials works—sort of. It is, however, confusing, lacks a coherent conceptual basis, and fails to strike the proper balance among the competing objectives of RCRA. While RCRA gives EPA broad authority to regulate virtually all recyclable materials, it also gives EPA the authority to tailor the application of the hazardous waste requirements of Subtitle C to recyclable materials based on an assessment of the environmental risks of recycling and a balancing of RCRA's competing objectives. EPA can better implement these objectives by defining hazardous solid wastes to include recyclable materials only where the recycling is equivalent to disposal or the recycling is a sham. EPA has nonregulatory tools available that can produce significant incentives for proper management of recyclable materials without the creating the disincentives to recycling that arise from regulating recyclable materials as hazardous waste. Such a regulatory program can result in an environmentally sound system that encourages the proper recycling of materials.