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# EPA's Definition of "Solid Waste" Under Subtitle C of the Resource Conservation and Recovery Act: Is EPA Adequately Protecting Human Health and the Environment While Promoting Recycling?

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# EPA'S DEFINITION OF "SOLID WASTE" UNDER SUBTITLE C OF THE RESOURCE CONSERVATION AND RECOVERY ACT: IS EPA ADEQUATELY PROTECTING HUMAN HEALTH AND THE ENVIRONMENT WHILE PROMOTING RECYCLING?

Steven G. Davison\*

## I. INTRODUCTION

An industrial or other business facility that generates hazardous secondary materials<sup>1</sup> may seek to recover valuable parts of these materials, either to re-use them as raw materials or feedstock in the facility's production process or to sell them as a by-product (sometimes after removal of contaminants). Such a facility may seek to do so to increase the facility's profits by increasing the facility's sales, by reducing the facility's expenditures for raw materials and by avoiding stringent and expensive Environmental Protection Agency (EPA) regulations under Subtitle C of the federal Resource Conservation and Recovery Act<sup>2</sup> (RCRA or "the Act").

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<sup>1</sup> The United States Environmental Protection Agency (EPA) adopted a regulation in late 2008, 72 Fed. Reg. 64,757 (Oct. 30, 2008), which defines "hazardous secondary material" to mean "secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste under part 261 of chapter [40 of the Code of Federal Regulations]." 40 C.F.R. § 260.10 (2008). A "spent material" is defined by EPA as "any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing." 40 C.F.R. § 261.1(c)(1) (2008). "By-product" is defined by EPA 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. Examples are process residues such as slags or distillation column bottoms. 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.* § 261.1(c)(3). "Sludge" is defined by EPA to mean "any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant." 40 C.F.R. § 260.10. In 1985, EPA stated, although not in the form of a formal regulation, that a "secondary material" is a "material that potentially can be a solid and hazardous waste when recycled" and that secondary materials include "scrap metal, and commercial chemical products recycled in ways that differ from their normal use" as well as spent materials, byproducts and sludge. Preamble to Final Rule on Hazardous Waste Management System, Definition of Solid Waste, 50 Fed. Reg. 616 n. 4 (Jan. 4, 1985) [hereinafter 1985 Preamble]. Scrap metal is defined by EPA as "bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled." 40 C.F.R. § 261.1(c)(6). EPA's 2008 definition of "hazardous secondary material" seems to refer to spent materials, byproducts and sludge as examples of such secondary materials (by use of "e.g."), so scrap metals, recycled commercial chemical products and other secondary materials probably can be classified as "hazardous secondary material" under EPA's definition. EPA criteria for classifying discarded solid waste as hazardous waste under 40 C.F.R. part 261 are discussed *infra* notes 189-94 and accompanying text.

<sup>2</sup> 42 U.S.C. §§ 6921-6939e (2006). The Resource Conservation and Recovery Act (RCRA), which was enacted in 1976, Pub. L. 94-580, 90 Stat. 2796 (Oct. 21, 1976) and amended in 1978, Pub.

Subtitle C would regulate the facility's treatment, storage, and disposal of the secondary materials if they were classified as hazardous waste under the Act. Since the enactment of RCRA in 1976, EPA has struggled with the definition and criteria it should use in determining when a hazardous secondary recycled<sup>3</sup> material is a "hazardous waste" subject to regulation under Subtitle C of RCRA. EPA has changed its position on this issue numerous times during this period. As discussed in more detail later in this Introduction, this article examines the interpretation of "solid waste" under Subtitle C of RCRA by both EPA and the courts; it also examines the evolution of EPA regulations under Subtitle C of RCRA, which

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L. 95-609, 92 Stat. 3081 (Nov. 8, 1978), 1980, Pub. L. 96-482, 94 Stat. 2334 (Oct. 21, 1980), and 1984, Pub. L. 98-616, 98 Stat. 3221 (Nov. 8, 1984), replaced the Solid Waste Disposal Act of 1965, Pub. L. 89-272, Title II. Consequently, sometimes RCRA is referred to as the Solid Waste Disposal Act. This article hereinafter will refer to the Act as RCRA.

<sup>3</sup> EPA under RCRA's Subtitle C, which regulates hazardous solid wastes, defines a "recycled" material as one that is "used, reused, or reclaimed." 40 C.F.R. § 261.1(c)(7) (2008). A "used or reused material" is defined by EPA as one that is:

(i) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

*Id.* § 261.1(c)(5).

A "reclaimed" material is defined by EPA as one that "is processed to recover a usable product, or . . . is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents." *Id.* § 261.1(c)(4). "Wastes are regenerated when they are processed to remove contaminants in a way that restores the wastes to their useable original condition." EPA, *Guidance for Identifying Incidental Processing Activities* (Office of Solid Waste Oct. 2005), <http://www.epa.gov/epaoswer/hazwaste/recycle/pro-guid.pdf>, at 4 (last visited Dec. 1, 2009) [hereinafter *Incidental Processing Activities Guidance*]. "In a reclamation operation, some components of a material are recovered and reused, while others are separated and in some cases discarded." Preamble to 2003 Proposed Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558, at 61,562 (Oct. 28, 2003) [hereinafter 2003 Preamble]. See *id.* at 61,564-65. Reclamation involving regeneration of used products or materials results in materials

that . . . can be reused for their original purpose, or for some other purpose. A common example of this type of reclamation is found in the steel making industry, where 'pickling' acids are used to remove scale and other impurities from steel, eventually lose their acidic properties, and must be reclaimed before they can be used again as pickling agents. In this case, the reclamation process may yield both regenerated pickling acid, as well as a marketable iron oxide product.

*Id.* at 61,565. EPA has described "recycling" as "involv[ing] a series of activities, including storage and other handling steps that culminate in the production of a valuable end product of some kind," and has indicated that reclamation of a material which is needed "to produce a valuable end product . . . can be thought of as one step in the overall recycling process." Preamble to 2007 Proposed Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172, at 14,173 n.1 (March 26, 2007) [hereinafter 2007 Preamble].

define when particular recycled hazardous secondary materials will be excluded from the Subtitle C regulations applicable to hazardous solid wastes.

RCRA is based partly upon Congress' findings that there were increasingly large amounts of discarded consumer products<sup>4</sup> and "scrap, discarded and waste materials" from construction, industrial, commercial, and agricultural operations<sup>5</sup> that can endanger human health and the environment because these solid and hazardous wastes often are carelessly disposed of on land<sup>6</sup> and "inadequate controls on hazardous waste management will result in substantial risks to human health and the environment . . . ."<sup>7</sup> Congress also found that "the recovery and conservation of [recovered usable] . . . materials [from such solid waste] can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments,"<sup>8</sup> and that "solid waste represents a potential source of solid fuel, oil, or gas that can be converted into energy."<sup>9</sup>

Congress declares in RCRA that it is

the national policy of the United States that, whenever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible [and that waste] that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.<sup>10</sup>

RCRA's objectives consequently include promoting "the protection of health and the environment and . . . conserv[ation of] valuable material and energy resources" by requiring proper disposal and management of solid and hazardous wastes,<sup>11</sup> recovery of usable materials from solid wastes,<sup>12</sup> and "minimiz[ation of] the

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<sup>4</sup> 42 U.S.C. § 6901(a)(1) (2006).

<sup>5</sup> *Id.* § 6901(a)(2).

<sup>6</sup> *Id.* § 6901(b)(1)-(2).

<sup>7</sup> *Id.* § 6901(b)(5).

<sup>8</sup> *Id.* § 6901(c)(3).

<sup>9</sup> *Id.* § 6901(d)(1). EPA has similarly stated that "[u]se and reuse of materials that would otherwise be disposed of conserves our natural resources, by minimizing the use of raw materials, saving disposal capacity, and making use of the value remaining in these materials." Incidental Processing Activities Guidance, *supra* note 3, at 3 (last visited Dec. 1, 2009).

<sup>10</sup> 42 U.S.C. § 6902(b).

<sup>11</sup> *Id.* § 6902(a)(1), (a)(3)-(5).

<sup>12</sup> *Id.* § 6901(a)(1). RCRA's "statutory provisions referring to reuse or recycling of 'solid waste' . . . are directed at the recycling of 'solid waste' as a way to manage, and indeed benefit from, materials that present a waste management problem by virtue of having been disposed of." *Am. Mining Cong. v. EPA (AMC I)*, 824 F.2d 1177, 1189 (D.C. Cir. 1987).

Congress' "overriding concern" in enacting RCRA was to establish the framework for a national system to insure the safe management of hazardous waste. H.R. Rep. No. 1491, 94th Cong., 2d Sess. 3 (1976). In passing RCRA, Congress expressed concern over the "rising tide" in scrap, discarded and waste materials. 42 U.S.C. § 6901(a)(2). As the statute itself puts it, Congress was concerned with the need "to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid waste disposal practices." *Id.* § 6901(a)(4). Congress thus crafted RCRA "to promote the protection of health and the environment and to conserve valuable material and energy resources." *Id.* § 6902. See *AMC I*, 824 F.2d at 1179.

generation of hazardous waste and the land disposal of hazardous waste by encouraging process substitution, materials recovery, properly conducted recycling and reuse, and treatment . . . .”<sup>13</sup> Therefore “[a]n increase in reclamation and reuse practices is a major objective of the Resource Conservation and Recovery Act”,<sup>14</sup> and “[o]ne of RCRA’s primary goals is to promote recovery of reusable material that is currently being ‘needlessly buried.’”<sup>15</sup>

While EPA has stated that it has had a “longstanding policy of encouraging the recovery and reuse of valuable resources as an alternative to land disposal,”<sup>16</sup> EPA’s position is that “the paramount and overriding statutory objective of RCRA is protection of human health and the environment” from solid and hazardous wastes, with “RCRA’s statutory policy of encouraging recycling [a] secondary” objective of RCRA that “must give way if it is in conflict with the principal objective.”<sup>17</sup>

Even though businesses may “adopt . . . responsible recycling practices in the management of their hazardous secondary materials . . . [because of] concern of liability under the Comprehensive Environmental Response, Compensation and Liability act (CERCLA), also known as Superfund . . . and concerns about corporate responsibility and public relations,”<sup>18</sup> EPA has found that “hazardous secondary materials stored or transported prior to recycling have the potential to present the same types of threats to human health and the environment as hazardous wastes stored or transported prior to disposal.”<sup>19</sup> According to EPA, these threats are a result of spills, leaks, and other releases of such materials, particularly during storage prior to reclamation<sup>20</sup> or while such materials are being handled in recycling processes,<sup>21</sup> or due to mismanagement of recycled hazardous

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<sup>13</sup> 42 U.S.C. § 6902(a)(6).

<sup>14</sup> *Safe Air for Everyone v. Meyer*, 373 F.3d 1035, 1045 (9th Cir. 2004) (quoting H.R. Rep. No. 94-1491, at 3 (1976)).

<sup>15</sup> *AMC I*, 824 F.2d at 1189 n.17 (quoting 42 U.S.C. 6901(c)(1)).

<sup>16</sup> 2007 Preamble, *supra* note 3, at 14,176.

<sup>17</sup> 1985 Preamble, *supra* note 1, at 618.

<sup>18</sup> 2007 Preamble, *supra* note 3, at 14,179. “Under [section 107(a)(3), 42 U.S.C. § 9607(a)(3), of] CERCLA, a company can be held liable [for cleanup costs] as an arranger for disposal for contamination caused by its materials sent for recycling at another facility’s site.” *Id.* Furthermore, the owner and/or operator of a facility which generates a hazardous substance, which it recycles and reclaims at the facility where the substance was generated, may be liable under CERCLA for cleanup costs, as the owner and/or operator of the facility if that substance is released, or is threatened to be released into the environment under sections 107(a)(1) and 107(a)(2), 42 U.S.C. § 9607(a)(1)-(2).

<sup>19</sup> 2007 Preamble, *supra* note 3, at 14,181.

<sup>20</sup> 1985 Preamble, *supra* note 1, at 618.

<sup>21</sup> 2007 Preamble, *supra* note 3, at 14,181. *See AMC I*, 824 F.2d at 1196 (Mikva, J., dissenting) (emphasizing that even “in-process” spent secondary materials that are recycled by the industry which generated the materials

can pose the same risks as abandoned wastes, whether the manufacturer intends eventually to put them to further beneficial use. As the . . . [EPA] explained, “[s]imply because a waste is likely to be recycled will not ensure that it will not be spilled or leaked before recycling occurs.” The storage, transportation and recycling of in-process secondary materials can cause severe environmental

secondary materials and recycling residuals prior to, during, or after recycling processes (such as abandonment of materials or accumulation of more material than can be recycled in a reasonable period of time).<sup>22</sup>

EPA, in dealing with the issue of what recycled hazardous secondary materials should be classified as hazardous solid waste that can be regulated under Subtitle C of RCRA, has identified three different types of processes involving the recycling of hazardous secondary materials:

(1) Commercial recycling, where the primary business of the firms is recycling hazardous secondary materials, which are accepted for recycling from offsite industrial sources (who usually pay a fee); (2) industrial intra-company recycling, where firms generate hazardous secondary materials as by-products of their main production processes and recycle the hazardous secondary materials for sale or for their own reuse in production; and (3) industrial inter-company recycling, . . . [involving] firms whose primary business is not recycling, but use or recycle hazardous secondary materials obtained from other firms with the objective of reducing the cost of their production inputs.<sup>23</sup>

EPA's position is that:

[e]xcluding [from the RCRA definition of "solid waste"] all hazardous secondary materials destined for recycling would allow materials to move in and out of the [RCRA] hazardous waste management system depending on what any person handling the material intended to do with it. This seems inconsistent with the mandate [under RCRA] to track hazardous wastes and control them from "cradle to grave."<sup>24</sup>

EPA maintained, from the mid-1980s until just recently, that "most hazardous secondary materials" that were accumulated and recycled were solid and hazardous wastes under RCRA<sup>25</sup> and that EPA had authority under Subtitle C to regulate

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harm. . . . [The EPA] also pointed out the risk of damage from spills or leaks when certain in-process secondary materials are placed on land or in underground product storage. (citation omitted)).

<sup>22</sup> 2007 Preamble, *supra* note 3, at 14,181, 14,183.

<sup>23</sup> *Id.* at 14,183. The first category of commercial reclamation facilities includes reclamation facilities which recycle secondary spent materials obtained from other facilities in different industrial categories, in order to reclaim valuable commodities from such recycled materials. *Id.* The third category includes recycling of secondary spent or byproduct materials obtained from other companies' facilities, in order to reclaim valuable commodities which may be used by the reclaimer as a feedstock or catalyst in its production processes as a substitute for virgin feedstock or catalysts. *Id.*

<sup>24</sup> *Id.* at 14,176.

<sup>25</sup> 1985 Preamble, *supra* note 1, at 616.

recycled secondary materials as hazardous solid wastes.<sup>26</sup> EPA concedes, however, that its authority under RCRA “over recycling activities is not unlimited” and that it does not have authority under RCRA over “certain types of recycling activities that are shown to be very similar to normal production operations or to normal uses of commercial products.”<sup>27</sup> EPA, in exercising its authority under RCRA from the date of RCRA’s enactment until the present, has exempted from regulation only secondary materials that are recycled, reclaimed, and reused in “legitimate recycling,”<sup>28</sup> while regulating waste materials that are, in truth, disposed of or treated in “sham recycling”<sup>29</sup> to protect human health and the environment from hazardous wastes.<sup>30</sup> EPA, however, stated during this period that it did not interpret RCRA as providing “that a potentially harmful recycling practice is invariably subject to regulation under Subtitle C, since potential environmental harm is not always a determinative indicator of how closely a recycling activity resembles waste management.”<sup>31</sup>

To increase recycling of hazardous secondary materials while protecting human health and the environment, EPA in the fall of 2003, proposed new regulations<sup>32</sup> that would have defined “solid waste” under Subtitle C of RCRA in a manner that would have exempted hazardous secondary materials from the definition of “solid waste” only when the materials were recycled or reclaimed by a facility in the same industrial category as the facility that generated the materials.

However, EPA in the spring of 2007 proposed revisions<sup>33</sup> to these 2003 proposed regulations that were designed to expand broadly the categories of recycled and reclaimed hazardous secondary materials, which would be excluded from the definition of “solid waste” subject to regulation under Subtitle C of RCRA. In late 2008, EPA modified the proposed 2007 regulations in some respects and adopted final rules,<sup>34</sup> broadly expanding the types of recycled and reclaimed hazardous secondary materials (“such as industrial co-products, by-products, residues, and unreacted feedstocks”<sup>35</sup>) and excluding from the definition

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<sup>26</sup> Preamble to Proposed Rule for Hazardous Waste Management System, 48 Fed. Reg. 14473, 14502-505 (April 4, 1983) [hereinafter 1983 Preamble]; 1985 Preamble, *supra* note 1, at 616.

<sup>27</sup> 1985 Preamble, *supra* note 1, at 616-17.

<sup>28</sup> 2003 Preamble, *supra* note 3, at 61,560. EPA in late 2008 adopted two mandatory criteria and two optional non-binding consideration factors to be used in determining whether a particular recycling activity involving a hazardous secondary material is legitimate. 40 C.F.R. § 260.43. These criteria and factors are discussed *infra* notes 416-21 and accompanying text.

<sup>29</sup> 2003 Preamble, *supra* note 3, at 61,581. “Sham recycling” is defined by EPA as “some form of treatment or disposal being called recycling in an attempt to evade regulation.” *Id.* Sham recycling is discussed in more depth *infra* note 278.

<sup>30</sup> 2003 Preamble, *supra* note 3, at 61,560-61.

<sup>31</sup> 1985 Preamble, *supra* note 1, at 617.

<sup>32</sup> 2003 Preamble, *supra* note 3, at 61,558-61,600.

<sup>33</sup> 2007 Preamble, *supra* note 3, at 14,172-14,218.

<sup>34</sup> 40 C.F.R. §§ 261.2(a)(2)(ii); 261.4(a)(23)-(25). These new regulations, which were effective on December 29, 2008, are explained and interpreted in commentary in the Preamble to EPA’s 2008 Revisions to the Definition of Solid Waste. 73 Fed. Reg. at 64,668-757 (Oct. 30, 2008) [hereinafter 2008 Preamble].

<sup>35</sup> 2008 Preamble, *supra* note 34, at 64,668. EPA defines “hazardous secondary material” in 40 C.F.R. § 260.10, which is discussed *supra* note 1.

of “solid waste” the materials subject to regulation by EPA under Subtitle C of RCRA. These 2008 regulations exempt from regulation under Subtitle C hazardous secondary materials that are legitimately recycled or reclaimed (under new criteria defining “legitimate recycling”), either at a facility located in the United States (or one of its territories) while under the control of the generator (either at the facility where the materials were generated or at another facility under the generator’s control) or at a reclamation facility operated by a person not under the control of the generator (including reclamation facilities located in foreign countries). The new 2008 rules seek to “encourage and expand the safe, beneficial recycling of additional hazardous secondary materials . . . consistent with EPA’s longstanding policy of encouraging the recovery, recycling, and reuse of valuable resources as an alternative to disposal (i.e., landfilling and incineration), while at the same time maintaining protection of human health and the environment.”<sup>36</sup> EPA asserts that the new 2008 regulations are “consistent with the resource conservation goal of the Congress in enacting the RCRA statute (as evidenced by the statute’s name), and with EPA’s vision of how the RCRA program could evolve over the long term to promote economic sustainability and more efficient use of resources.”<sup>37</sup>

This Article traces the evolution, from the 1980s through EPA’s promulgation in 2008 of these new revised rules, of EPA’s definition of “solid waste” under Subtitle C of RCRA and judicial interpretations of “solid waste” under Subtitle C of RCRA. In addition, this Article analyzes the situations in which recycled discarded consumer products and recycled secondary materials and by-products from industrial and commercial facilities have been considered to be “solid waste” under EPA regulations promulgated under EPA’s hazardous waste regulatory program, under Subtitle C of RCRA and under judicial decisions interpreting the same regulatory scheme. Part II of this Article provides an overview of RCRA’s regulatory requirements governing disposal of both non-hazardous solid wastes and hazardous solid wastes, while Part III discusses RCRA’s definitions of “solid waste” and “hazardous waste” and how courts have interpreted “solid waste” under RCRA, particularly in cases dealing with recycled consumer products, recycled secondary materials, and by-products from industrial and commercial facilities. Part IV of this article discusses EPA’s 1980s regulations that both defined “solid waste” for purposes of the hazardous solid waste regulatory program under Subtitle C of RCRA and classified many recycled materials as “solid waste” for purposes of the same Act. Parts V and VI discuss amendments to the regulations as EPA proposed them in 2003 and 2007, which were designed to exclude many recycled hazardous secondary materials and by-products generated by industrial and commercial facilities from the definition of “solid waste” under the Act. The Article closes with Part VII, which discusses the final 2008 EPA regulations, which now exclude many recycled industrial and commercial hazardous secondary materials and by-products from the definition of “solid waste” subject to regulation under subtitle C of RCRA.

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<sup>36</sup> 2008 Preamble, *supra* note 34, at 64,668.

<sup>37</sup> *Id.*



To further RCRA's objectives of protecting human health and the environment, while also promoting recycling of industrial and commercial spent and by-product materials, this Article recommends in Part VII that EPA's new 2008 regulations be amended in two significant respects. First, EPA should amend the 2008 final rules to prohibit recycling or reclamation of excluded hazardous secondary materials at a recycling or reclamation facility located in a foreign country. This is recommended because EPA has no authority under RCRA to monitor, inspect, or otherwise regulate reclamation and recycling facilities located in foreign countries; it is also advisable because hazardous secondary materials exported to reclamation facilities located in foreign countries may spill or leak from unsuitable storage containers that are not properly regulated by foreign countries, causing injuries to the health of people and to the environment of foreign countries. Second, EPA should amend its 2008 final rules to specify design and performance standards to govern the storage and containerization of recycled and reclaimed hazardous secondary materials, which are currently excluded from the definition of "solid waste" under Subtitle C of RCRA. This second recommendation would help protect human health and the environment from harm caused if such materials were to spill or leak from containers during the storage, recycling, or reclamation operations.

## II. OVERVIEW OF RCRA'S REGULATORY REQUIREMENTS

When it was enacted in 1976, "RCRA was intended as a 'multi-faceted approach toward solving the problems associated with the 3-4 billion tons of discarded materials generated each year, and the problems resulting from the anticipated 8% annual increase in the volume of such waste.'"<sup>38</sup> RCRA applies not only to "solid waste 'disposal'—in the sense of the affirmative acts of collecting, transporting, and treating manufacturing or industrial by-products"—but also applies to the "non-voluntary acts of depositing, spilling and leaking" of solid and hazardous wastes.<sup>39</sup>

RCRA regulates the disposal, storage, and treatment of both non-hazardous solid waste and hazardous solid waste,<sup>40</sup> with RCRA imposing much more stringent and expensive requirements on people involved in the generation, transportation, disposal, storage, or treatment of a hazardous solid waste than RCRA imposes upon those involved in the disposal or management of a non-hazardous solid waste. "In general, hazardous wastes are subject to RCRA's full 'cradle to grave' regulatory system from the time they are generated to the time that they are ultimately disposed," although "hazardous secondary materials often

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<sup>38</sup> *Safe Air for Everyone v. Meyer*, 373 F.3d 1035, 1045 (9th Cir. 2004) (quoting H.R. REP. NO. 94-1491, at 2 (1976)).

<sup>39</sup> *Conn. Coastal Fishermen's Ass'n. v. Remington Arms Co.*, 989 F.2d 1305, 1314 (2d Cir. 1993).

<sup>40</sup> *AMCI*, 824 F.2d at 1179.

can be recycled instead of being disposed, which can change how these wastes are regulated.”<sup>41</sup>

A recycled hazardous secondary material may not be classified as RCRA “hazardous waste,” and therefore may not be subject to regulation under the Act when the recycled material is not RCRA “solid waste.” A secondary material is not classified as a “hazardous waste” under RCRA unless the waste is first found to be a “solid waste” under the Act.<sup>42</sup> This principle follows from RCRA’s definition of a “‘hazardous waste’ . . . as a subset of ‘solid waste[.]’ [Therefore,] the scope of EPA’s jurisdiction [under Subtitle C of RCRA] is limited to those materials that constitute ‘solid waste.’”<sup>43</sup>

Because RCRA generally defines a “solid waste” as a “discarded material”<sup>44</sup> (as will be discussed in more detail in Part III), in some situations EPA or a court may not classify a hazardous secondary material, resulting from the operations of a commercial or industrial facility, as a “solid waste” subject to regulation under Subtitle C of RCRA, if the material or substance is legitimately recycled and re-used either by the facility that generated the material or substance or by another facility. When the hazardous secondary material, which the generating facility recycles and reuses, is not considered to be a “solid waste” under Subtitle C of RCRA, the recycled secondary material will not be subject to any of EPA’s stringent regulatory requirements under the Act which apply to those involved in the generation, transportation, disposal, storage, or treatment of a hazardous solid waste. (This is so even when the recycled material meets EPA’s criteria under RCRA for classification as “hazardous.”)

Furthermore, EPA encourages recycling of hazardous secondary materials, which are classified as hazardous solid waste despite being recycled, by using Subtitle C regulations<sup>45</sup> that establish special standards governing recycled hazardous solid waste. These special standards are less demanding than EPA’s general regulations governing hazardous waste generators, transporters and treatment, storage and disposal facilities under Subtitle C of RCRA.<sup>46</sup> Although

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<sup>41</sup> 2007 Preamble, *supra* note 3, at 14,175.

<sup>42</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1313; *United States v. ILCO, Inc.*, 996 F.2d 1126, 1130 (11th Cir. 1993).

<sup>43</sup> *Id.* at 1179.

<sup>44</sup> 42 U.S.C. § 6903(27) (2006).

<sup>45</sup> 40 C.F.R. § 261.6 (2008).

<sup>46</sup> EPA provides an overview of these less-stringent, or relaxed, management standards for collection and/or recycling of certain specified secondary materials, which are designed to make it easier for handlers of these materials to collect them and send them for recycling or proper disposal. EPA, *Hazardous Waste Recycling Regulations*, <http://www.epa.gov/epawaste/hazard/recycling/regulations.htm> (last visited Jan. 26, 2010). EPA has indicated on this webpage that it developed these hazardous waste recycling regulations to promote the reuse and reclamation of useful materials in a manner that is safe and protective of human health and the environment. *Id.* EPA has special management standards for the collection or recycling of certain “universal” wastes (batteries (other than spent-lead-acid batteries), pesticides, lamps (e.g., fluorescent bulbs), and mercury-containing equipment (e.g., thermostats)), which are at 40 C.F.R. Part 273. EPA also has special management standards for certain other recycled products which are classified as hazardous solid wastes under RCRA, which are at 40 C.F.R. Part 266 subparts C, F, G, & H, and Part 279 and which are

these special EPA standards regulate facilities that store recycled hazardous wastes,<sup>47</sup> EPA regulations generally provide that “[t]he recycling process itself is exempt from regulation” under RCRA.<sup>48</sup> This is significant because as a consequence, “RCRA does not require Part B [treatment facility] permits for the recycling processes themselves; [although] typically, permits are issued to such facilities when hazardous secondary materials are stored prior to recycling.”<sup>49</sup> However, even if a facility generates a hazardous solid waste subject to regulation under the Act, the facility may still be able to limit the regulations governing hazardous waste “generators” by accumulating and then reclaiming the hazardous waste at the same site where the materials are generated within time limits and under conditions specified by EPA regulations at the site.<sup>50</sup> In this manner, the

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summarized at 40 C.F.R. § 261.6. 40 C.F.R. § 261.6(a)(1) provides that “[h]azardous wastes that are recycled [which are referred to as “recyclable materials”] are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section.” Paragraph (a)(2) of 40 C.F.R. § 261.6 requires certain specified recyclable materials only to comply with subparts C through O of 40 C.F.R. Part 266 and all applicable provisions of 40 C.F.R. Parts 124 and 270, while paragraph (a)(3) of 40 C.F.R. § 261.6 exempts certain other specified recyclable materials from regulation under 40 C.F.R. Parts 124, 262-266, 268 & 270 and from the notification requirements of section 3010 of RCRA. 40 C.F.R. § 261.6(b) provides that “[g]enerators and transporters of recyclable materials are subject to the applicable requirements of [40 C.F.R.] parts 262 and 263 . . . and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section.” 40 C.F.R. § 261.6(c)(1) provides that “[o]wners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of [40 C.F.R.] subparts A through L, AA, BB, and CC of parts 264 and 265, and under parts 124, 266, 268, and 270 . . . and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section.” 40 C.F.R. § 261.6(d) states that “[o]wners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of [40 C.F.R.] subparts AA and BB of part 264 or 265 . . .” 40 C.F.R. § 261.6(c)(2) provides that except as provided in 40 C.F.R. § 261.6(a), owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject only to the notification requirements under section 3010 of RCRA, 40 C.F.R. §§ 265.71-.72 (dealing with the use of the manifest and manifest discrepancies) and 40 C.F.R. § 261.6(d).

<sup>47</sup> 40 C.F.R. § 261.6(c)(1) (2008).

<sup>48</sup> *Id.* This provision provides that “[t]he recycling process itself is exempt from regulation except as provided in § 261.6(d).” 40 C.F.R. § 261.6(d) provides that “[o]wners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264 or 265 of this chapter.” EPA has stated that it “usually do[es] not regulate the recycling process itself, except when the recycling is analogous to land disposal or incineration . . . [or] burning for energy recovery . . .” 1985 Preamble, *supra* note 1, at 643. See 40 C.F.R. §§ 261.5(f)(3), (g)(3) (authorizing a conditionally exempt small quantity generator (a generator that generates no more than 100 kilograms of hazardous waste, or one kilogram of acute hazardous waste, in a calendar month) either to treat or to dispose of hazardous waste in an on-site facility that “[b]eneficially uses or reuses, or legitimately recycles or reclaims its waste; or [t]reats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation . . .”).

<sup>49</sup> 2007 Preamble, *supra* note 3, at 14,182.

<sup>50</sup> The generator would not need a RCRA Part B treatment facility permit because, as noted above, the recycling process itself is not “treatment” subject to regulation under Subtitle C of RCRA; and the generator would not need a RCRA Part B storage facility permit if it limits on-site accumulation of its generated hazardous wastes to ninety days or fewer, because EPA regulations, 40

waste facility avoids the much more complex and costly regulations under Subtitle C of RCRA governing facilities engaged in the treatment, storage, or disposal of hazardous wastes.

RCRA's regulatory requirements for the disposal of non-hazardous solid waste are much less stringent than RCRA's requirements for hazardous solid

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C.F.R. § 262.34, authorize a generator of a hazardous waste to accumulate those wastes at the site of the generation for at least ninety days without the need for a RCRA TSD Part B permit. 40 C.F.R. § 262.34(a) states that except as provided in paragraphs (d), (e) and (f) of the section, a generator may accumulate hazardous waste on-site for ninety days or less without having a permit or without having interim status, provided that the waste is placed in containers, tanks, drip pads or containment buildings that meet specified storage requirements. This ninety day accumulation/storage exception for generators does not apply to generated wastes that are placed in waste piles or impoundments. 1985 Preamble, *supra* note 1, at 651. A hazardous waste generator also must comply with 40 C.F.R. §§ 265.111 & 265.114 and with requirements for owners or operators in 40 C.F.R. Part 265 Subparts C & D, with 40 C.F.R. § 265.16 and with 40 C.F.R. § 268.7(a)(5), in order for this ninety day accumulation/storage exception to be applicable. A generator which accumulates hazardous waste for more than ninety days is considered an operator of a storage facility that is subject to 40 C.F.R. Parts 264 & 265 and the permit requirements of 40 C.F.R. Part 270, unless an EPA Regional Administrator grants the generator an extension, which can be for up to thirty days, by due to "unforeseen, temporary, and uncontrollable circumstances" (as determined on a case-by-case, discretionary basis). 40 C.F.R. § 262.34(b) (2006).

EPA regulations also exempt certain small-quantity generators of hazardous waste from the thirty-day storage limitation. Subject to certain specified requirements, 40 C.F.R. § 262.34(c) exempts a generator of less than fifty-five gallons of hazardous waste or less than one quart of acute hazardous waste from the ninety day accumulation limit of 40 C.F.R. § 262.34(a). Under 40 C.F.R. § 261.5, a generator of no more than 100 kilograms of non-excluded hazardous waste in a calendar month is a "conditionally exempt small quantity generator" whose hazardous wastes, except for certain specified wastes, are not subject to regulation under 40 C.F.R. Parts 262-266, 268 and 270 and under the notification requirements under section 3010 of RCRA, provided the generator complies with specified requirements, including limits on the total amounts of hazardous waste that can be accumulated on-site. The time period under 40 C.F.R. § 262.34(a) for accumulation of on-site wastes begins when a conditionally exempt small quantity generator's accumulated waste exceeds the applicable exclusion limit. 40 C.F.R. § 261.5(f)(2). 40 C.F.R. § 262.34(d) authorizes a generator, of more than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month, to accumulate hazardous waste on-site for 180 days or less without a permit or without interim status, provided that the total quantity of waste accumulated on-site never exceeds 6,000 kilograms and that the generator complies with certain specified requirements. "The time period of § 262.34(d) for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1,000 kilograms." 40 C.F.R. § 261.5(g)(2). A generator of between 100 kilograms and 1,000 kilograms of hazardous waste in a calendar month which must transport that waste a distance of 200 miles or more for off-site treatment, storage or disposal may accumulate the waste on-site for up to 270 days without a permit or interim status, provided that the generator complies with 40 C.F.R. § 262.34(d). 40 C.F.R. § 262.34(e). An EPA Regional Administrator can grant an extension, of up to thirty days, of the 180 day or 270 day accumulation limit under § 262.34(d), or under (e), due to "unforeseen temporary and uncontrollable circumstances" (on a case-by-case, discretionary basis). 40 C.F.R. § 262.34(f) (2008). 40 C.F.R. §§ 262.34(g)-(i) provide for extensions of the ninety day accumulation limit to certain generators of F006 hazardous wastes, while 40 C.F.R. §§ 262.34(j)-(k) provide for extensions of the ninety day accumulation limit to certain generators who are members of EPA's Performance Track program.

waste. RCRA prohibits the open dumping of solid waste and hazardous waste.<sup>51</sup> It requires non-hazardous solid waste that is not disposed of to be utilized for resource recovery (defined as “the recovery of material or energy from solid waste”<sup>52</sup>), while also requiring disposal of non-hazardous solid waste in a sanitary landfill that meets EPA regulatory requirements or in an otherwise environmentally sound manner under an EPA-approved state or regional solid waste management plan.<sup>53</sup>

RCRA regulates treatment, storage, and disposal of non-recycled hazardous solid waste much more strictly than it regulates recycled hazardous waste and disposal of non-hazardous solid waste, through “regulations establishing a comprehensive management system,”<sup>54</sup> under “a ‘cradle to grave’ regulatory structure”<sup>55</sup> of Subchapter III [Subtitle C] of RCRA.<sup>56</sup> This subchapter requires EPA to establish standards regulating generators<sup>57</sup> and transporters<sup>58</sup> of hazardous solid waste and owners and operators of facilities involved in the treatment, storage, or disposal of hazardous solid waste.<sup>59</sup> RCRA’s regulatory requirements are most stringent for a facility engaged in the disposal, storage, or treatment of hazardous solid waste. A hazardous solid waste facility is required to have a permit under section 3005<sup>60</sup> of RCRA, which is issued either by EPA or a state with an EPA-approved hazardous waste management program and the facility must comply with EPA regulations under RCRA’s stringent standards governing disposal, treatment, and storage of hazardous solid waste. “In the 1984 amendments to RCRA, Congress shifted the focus of hazardous waste management away from land disposal [that sometimes resulted in spills and leaks of hazardous wastes that endanger human health and the environment] to treatment alternatives,”<sup>61</sup> based upon its determination that:

[C]ertain classes of land disposal facilities are not capable of assuring long-term containment of certain hazardous wastes, and to avoid substantial risk to human health and the environment, reliance on land disposal should be minimized or eliminated . . . . Land disposal . . . should be the least favored method for managing hazardous wastes.<sup>62</sup>

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<sup>51</sup> 42 U.S.C. § 6945(a) (2006). RCRA defines “open dump” to mean “any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title and which is not a facility for disposal of hazardous waste.” *Id.* § 6903(14).

<sup>52</sup> *Id.* § 6903(22).

<sup>53</sup> *Id.* § 6943(a)(2).

<sup>54</sup> *AMCI*, 824 F.2d at 1179.

<sup>55</sup> *United Technologies Corp. v. EPA*, 821 F.2d 714, 716 (D.C. Cir. 1987).

<sup>56</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1314. The provisions of Subchapter III [Subtitle C] of RCRA are codified at 42 U.S.C. §§ 6921-6939(e).

<sup>57</sup> 42 U.S.C. § 6922 (2006).

<sup>58</sup> *Id.* § 6923.

<sup>59</sup> *Id.* § 6924.

<sup>60</sup> *Id.* § 6925.

<sup>61</sup> *Am. Petroleum Inst. v. EPA*, 906 F.2d 729, 733 (D.C. Cir. 1990).

<sup>62</sup> *Id.* (quoting 42 U.S.C. § 6901(b)(7)). “Consistent with this finding, Subtitle C of the RCRA prohibits hazardous wastes from being disposed of on the land unless one of two conditions is

### III. RCRA'S DEFINITIONS OF SOLID WASTE AND HAZARDOUS WASTE

#### A. RCRA's Definition of Solid Waste

Subject to certain exceptions, a "solid waste" is defined under section 1004(27)<sup>63</sup> of RCRA to mean any "discarded material" that is not a non-containerized gas and whose source is not a residential household or other non-industrial, non-commercial activity. Section 1004(27) of RCRA provides that

[t]he term "solid waste" means 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, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

RCRA's reference to "other discarded material" after the references to "garbage, refuse and sludge" from specified types of plants and facilities "should be read to mean that the listed materials are solid waste only if they also are 'discarded.'"<sup>64</sup> Furthermore, the wording of RCRA's definition of "solid waste" means that "solid waste" under RCRA does not include either a non-containerized gas, emissions of which may be regulated under the federal Clean Air Act,<sup>65</sup> or material originating from a residential household or other source that is not either an industrial, commercial, mining, or agricultural operation or commercial activity.

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satisfied: (1) the Administrator of EPA determines, 'to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous.' 42 U.S.C. § 6924(d), (e), (g), (m); or (2) the waste is treated to meet standards established by EPA pursuant to 42 U.S.C. § 6924(m)." *Id.* "[42 U.S.C. §] 6924(k) of the RCRA specifically includes the placement of hazardous waste in a 'land treatment facility' [in which the treatment of hazardous wastes occurs only after the waste has been land disposed] within its definition of land disposal. . . . Consequently, land treatment [a form of land disposal involving the placement of hazardous waste directly on the ground, rather than, for example, in a landfill or surface impoundment, with the expectation that the hazardous constituents will eventually become less hazardous] is subject to all of the statutory restrictions applicable to land disposal generally." *Id.* at 735. 42 U.S.C. § 6924(m)(1) requires the EPA Administrator to "promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized."

<sup>63</sup> 42 U.S.C. § 6903(27) (2006).

<sup>64</sup> *Safe Food and Fertilizer v. EPA*, 350 F.3d 1263, 1269 (D.C. Cir. 2003), *petition for reconsideration granted in part*, 365 F.3d 46 (D.C. Cir. 2004).

<sup>65</sup> 42 U.S.C. §§ 7401-7671q (2006).

RCRA's definition of "solid waste" encompasses not only manufacturing waste by-products, but also "the products themselves once they have served their intended purposes and are no longer wanted by a consumer."<sup>66</sup> Congress intended the term "discarded material" under RCRA's definition of "solid waste" to include post-consumer waste,<sup>67</sup> so that RCRA "solid waste" includes spent batteries and battery parts discarded and generated by consumers which are obtained from commercial suppliers rather than directly from a consumer.<sup>68</sup> However, the exclusions from RCRA's definition of "solid waste" mean that "solid waste" under RCRA does not include either pollutants in domestic sewage,<sup>69</sup> irrigation return flows, or industrial discharges because they are point sources subject to permitting and other regulation under section 402<sup>70</sup> of the Clean Water Act,<sup>71</sup> or radioactive materials regulated under the Atomic Energy Act.

Congress contemplated that EPA "would refine and narrow the definition of solid waste for the sole purpose of Subchapter III [hazardous waste] regulation and enforcement."<sup>72</sup> As discussed in more detail *infra* in parts IV-VI of this article, EPA has adopted regulations<sup>73</sup> under RCRA that define "solid waste" for purposes of implementing EPA's regulatory authority over RCRA hazardous wastes under Subtitle C of RCRA.<sup>74</sup> EPA's regulatory definition of "solid waste" under its 1985 definition<sup>75</sup> of "solid waste" under Subtitle C was narrower than RCRA's statutory definition of "solid waste."<sup>76</sup>

An EPA regulation<sup>77</sup> provides that RCRA's statutory definition of "solid waste," rather than EPA's subtitle C regulatory definition of "solid waste," be

<sup>66</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1314 (quoting H.R. REP. NO. 94-1491, at 2 (1976)).

<sup>67</sup> *United States v. ILCO, Inc.*, 996 F.2d 1126, 1132 (11th Cir. 1993) (citing H.R. REP. NO. 94-1491, at 2 (1976)).

<sup>68</sup> *Id.* at 1132.

<sup>69</sup> The exclusion from RCRA's definition of "solid waste" of "solid or dissolved material in domestic sewage" only applies to materials in sewage that comes from residential houses. *See Comite Pro Roscate de La Salud v. P.R. Aqueduct & Sewer Auth.*, 888 F.2d 180, 184 (1st Cir. 1989); *see also Lincoln Properties v. Higgins*, 1993 U.S. Dist. LEXIS 1251 (E.D. Cal. 1993).

<sup>70</sup> 33 U.S.C. § 1342 (2006).

<sup>71</sup> Industrial discharges subject to NPDES (National Pollutant Discharge Elimination System) permits under section 402 of the Clean Water Act therefore are not RCRA "solid waste." *Coldani v. Hamm*, No. Civ. S-07-660 RRB EFB, 2007 U.S. Dist. LEXIS 62644, at \*36 (E.D. Cal. Aug. 14, 2007); *New York v. PVS Chemical, Inc.*, 50 F. Supp. 2d 171, 177-78 (W.D.N.Y. 1998); *Williams Pipe Line Co. v. Bayer Corp.*, 964 F. Supp. 1300, 1328-29 (S.D. Iowa 1997).

The Clean Water Act's definition of "point source," 33 U.S.C. § 1362(14) (2006), excludes "return flows from irrigated agriculture," an exclusion similar to RCRA's exclusion from its definition of "solid waste" of "solid or dissolved materials in irrigation return flows . . ." 42 U.S.C. § 6903(27).

<sup>72</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1315.

<sup>73</sup> 40 C.F.R. §§ 261.1, 261.2 (2008).

<sup>74</sup> *Id.* § 261.1(b)(1).

<sup>75</sup> 50 Fed. Reg. at 664 (Jan. 4, 1985) (codified at 40 C.F.R. § 261.2 (1985)).

<sup>76</sup> *See Owen Electric Steel Co. v. Browner*, 37 F.3d 146, 148 n.3 (4th Cir. 1994); *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1314 (noting that EPA's position was that its regulatory definition of RCRA "solid waste" was narrower than RCRA's statutory definition of "solid waste").

<sup>77</sup> 40 C.F.R. § 261.1(b) (2008).

followed under sections 3007,<sup>78</sup> 3013,<sup>79</sup> and 7003<sup>80</sup> of RCRA. The Act's broader statutory definition of "solid waste" also applies in a citizen suit under section 7002(a)(1)(B)<sup>81</sup> of RCRA; such a suit would seek a court order against actions of a person involved with RCRA hazardous wastes "which 'may present an imminent and substantial endangerment to health or the environment.'"<sup>82</sup>

RCRA's statutory definition of "solid waste" includes "discarded material," which RCRA's statutory definition does not explicitly require to be "abandoned" or "disposed of."<sup>83</sup> However, because RCRA's legislative history<sup>84</sup> indicates that RCRA applies to consumer "'products . . . once they have served their intended purposes and are no longer wanted by the consumer,'"<sup>85</sup> material is "discarded" under RCRA "when it has been left to accumulate after serving its intended purpose."<sup>86</sup> However, material is not "discarded" under RCRA "until after it has served its intended purpose."<sup>87</sup> RCRA's legislative history, however, "does not tell us at what point products have served their intended purpose."<sup>88</sup> Under these standards, which focus upon a product's "intended purposes," insecticides used to control the mosquito-borne West Nile virus are not "discarded," for purposes of RCRA's definition of "solid waste," "when sprayed into the air with the design of effecting their intended purposes: reaching and killing mosquitoes and their larvae."<sup>89</sup> In addition, under these standards, lead shot from shotguns and target

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<sup>78</sup> 42 U.S.C. § 6927. Section 3007 of RCRA regulates EPA inspection of certain records and premises as parts of its authority to manage hazardous wastes.

<sup>79</sup> *Id.* § 6934. Section 3013 of RCRA authorizes EPA to require monitoring, testing, analysis and reporting by certain facilities or sites as part of EPA's management of hazardous wastes under RCRA.

<sup>80</sup> *Id.* § 6973. Section 7003 authorizes EPA either to file a suit for appropriate equitable relief or to issue administrative orders in cases where persons involved with hazardous wastes "may present an imminent and substantial endangerment to health or the environment . . ." *Id.*

<sup>81</sup> *Id.* § 6972(a)(1)(B).

<sup>82</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1315 (quoting 42 U.S.C. § 6972(a)(1)(B) (1988)).

<sup>83</sup> *Id.* at 1316 (quoting 42 U.S.C. § 6903 (1988) and 40 C.F.R. §§ 261.2(a)(2), (b)(1) (1992)). EPA's 1985 Subchapter C regulatory definitions of "discarded material" and "solid waste" include "abandoned" and "disposed of" material. 40 C.F.R. §§ 261.2(a)(1), (a)(2)(i), (b)(1). *See infra* notes 224-228 and accompanying text.

<sup>84</sup> H.R. REP. NO. 94-1491, at 2 (1976).

<sup>85</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1314 (quoting H.R. Rep. No. 94-1491, at 2 (1976)).

<sup>86</sup> *L.E.A.D. Group of Berks v. Exide Corp.*, Civ. No. 96-3030, 1999 U.S. Dist. LEXIS 2672, at \*19 (E.D. Pa. Feb. 19, 1999). *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1316, held that lead shot and clay trap and skeet targets that had accumulated for over seventy years in Long Island Sound, near a trap and skeet shooting range at a gun club, had accumulated long enough that they could be considered "discarded material" and "solid waste" under RCRA, although the court declined to decide how long materials must accumulate before they are considered "discarded" under RCRA. *See also* *Potomac River Keeper, Inc. v. National Capital Skeet and Trap Club, Inc.*, 388 F. Supp. 2d 582, 587 (D. Md. 2005) (lead shot from a shooting club that was on the ground is RCRA "solid waste").

<sup>87</sup> *No Spray Coalition, Inc. v. City of New York*, 252 F.3d 148, 150 (2nd Cir. 2001).

<sup>88</sup> *Conn. Coastal Fishermen's Ass'n.*, 989 F.2d at 1314.

<sup>89</sup> *No Spray Coalition, Inc.*, 252 F.3d at 150. The plaintiffs in *No Spray Coalition* argued that insecticide that is sprayed into the air, but that does not immediately land on mosquitoes or mosquito



debris at a shooting range are not “discarded material” under RCRA at the time the shots are fired.<sup>90</sup> For the same reason, military ordinance fired from ships and airplanes that make contact with land and surface water bodies are not RCRA “discarded material” immediately upon being fired<sup>91</sup> because such ordnance cannot be considered discarded until sometime after it has served its intended purpose by being fired and striking land.<sup>92</sup>

In *American Mining Congress v. Environmental Protection Agency*<sup>93</sup> (AMC I), the Circuit Court of Appeals for the District of Columbia, held that Congress used the term “discarded” in RCRA’s definition of “solid waste” “in its ordinary sense—‘disposed of’ or ‘abandoned’—[rather than] . . . in a much more open-ended way . . . [which would] encompass materials no longer useful in their original capacity though destined for immediate reuse in another phase of the industry’s ongoing production process.”<sup>94</sup> The court based its decision in part upon legislative history, finding that Congress “expressly stated objectives and the underlying problems that motivated it to enact RCRA in the first instance.”<sup>95</sup> The court concluded that RCRA’s definition of “solid waste” “extend[s] EPA’s authority only to materials that are truly discarded, disposed of, thrown away, or abandoned”; and the definition does not include “materials neither disposed of nor abandoned, but passing in a continuous stream or flow from one production process to another.”<sup>96</sup> The court supported this holding by its finding that:

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larvae, is RCRA “discarded material.” Insecticide sprayed into the air that does not immediately reach targeted mosquitoes or larvae should not be considered RCRA “discarded material” because such insecticide was sprayed into the air for the intended purpose of reaching and killing mosquitoes and their larvae and eventually in the future may come into contact with mosquitoes or their larvae and kill them.

<sup>90</sup> *Simsbury-Avon Preservation Society, LLC v. Metacon Gun Club, Inc.*, Civ. No. 3:04cv803(JBA), 2005 U.S. Dist. LEXIS 11699, at \*17 (D. Conn. June 14, 2005); *Long Island Soundkeeper Fund v. New York Athletic Club*, 94 Civ. 0436 (RPP), 1996 U.S. Dist. LEXIS 3383, at \*26 (S.D.N.Y. Mar. 22, 1996); *Otay Land Co. v. U.E. Ltd. LP*, 440 F. Supp. 2d 1152, 1180 (S.D. Cal. 2006). The court in *Otay* reasoned that the firing of ammunition from a weapon is within “the normal and expected use” of the product and ammunition hitting the ground is a normal expectation for the use of ammunition. *Id.* at 1180 (quoting 62 Fed. Reg. 6630 (Feb. 12, 1997)).

<sup>91</sup> *Water Keeper Alliance v. U. S. Dept. of Defense*, 152 F. Supp. 2d 163, 169 (D.P.R.), *aff’d* 271 F.3d 21 (1st Cir. 2001).

The District Court in *Water Keeper Alliance* did not decide the issue of whether ordnance debris and unexploded ordnance left to accumulate on land constitutes RCRA “solid waste.” 152 F. Supp. 2d at 167 n.3. The District Court in dicta mentioned the possibility that such munitions might have to “‘accumulate’ for an unspecified amount of time before they can be considered discarded material and thus solid waste.” *Id.* at 167.

<sup>92</sup> *Id.* at 168.

<sup>93</sup> 824 F.2d 1177 (D.C. Cir. 1987).

<sup>94</sup> *Id.* at 1185.

<sup>95</sup> *Id.* These objectives and underlying problems found by the court are discussed *supra* notes 4-15 and accompanying text.

<sup>96</sup> *Id.* at 1190. At issue in this case were certain secondary hydrocarbon “fractions” produced by petroleum refinery processes which are reprocessed by petroleum refineries into consumer products (such as gasoline and fuel oil); and natural metallic ores and dust, produced during primary metal production processing of natural metallic ores by mining facilities, which are reprocessed by mining facilities to extract metals. *See id.* at 1181; *infra* notes 102-109 and 250-254 and accompanying text.

RCRA was enacted . . . in an effort to help States deal with the ever-increasing problem of solid waste *disposal* by encouraging the search for and use of alternatives to existing methods of disposal (including recycling) and protecting health and the environment by regulating hazardous wastes. To fulfill these purposes, it seems clear that 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.*<sup>97</sup>

The court therefore held in *AMC I* that certain recycled secondary materials that are reused within an industry’s ongoing production processes are not “solid waste” under RCRA,<sup>98</sup> and that EPA exceeded its statutory authority under RCRA “by regulating in-process secondary materials . . . .”<sup>99</sup> EPA however, in 2003 noted that although in *AMC I* “the D.C. Circuit held that EPA exceeded its authority ‘in seeking to bring materials that are not discarded or otherwise disposed of within the compass of waste’. . . , [the court] did not specify which portions of the rules exceeded EPA’s authority. It more generally ‘granted the petition for review.’”<sup>100</sup> EPA also noted that

At the same time, the Court did *not* hold [in *AMC I*] that, no recycled materials could be [considered] discarded. The Court mentioned at least two examples of recycled materials that EPA properly considered within its statutory jurisdiction [under RCRA], noting that used oil to be reused as fuel and metal-bearing secondary materials stored in open piles which leached into the environment while stored for

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*Zands v. Nelson*, 779 F. Supp. 1254, 1262 (S.D. Cal. 1991), similarly regarded “abandoned” material as “discarded” under RCRA, holding that gasoline-contaminated soil and groundwater resulting from leakage of gasoline from underground storage tanks are “solid waste” under RCRA because the leaked gasoline must be considered “abandoned” via the leakage of the gasoline into the soil, even if the leakage was unintentional.

<sup>97</sup> *AMC I*, 824 F.2d at 1185-86 (emphasis in original). In footnote 11, the court further reasoned that it “fail[ed] to see how not regulating in-process secondary materials in an on-going production process will subvert RCRA’s waste disposal management goals. Our difficulty in discerning the stated necessity of this regulatory outreach is reinforced by the fact that the agency itself previously concluded that its regulatory authority did not extend to ongoing production processes of a manufacturer.” The court’s reference to EPA’s previous conclusion that its regulatory authority did not extend to ongoing production processes of a manufacturer apparently is referring to EPA’s proposed amendments in 1983 to its definition of “solid waste” under RCRA, 48 Fed. Reg. 14472, which are discussed *infra* notes 202-209 and accompanying text. The court’s holding with respect to the lawfulness of EPA’s classification of recycled in-process secondary materials, which are reused in an industry’s ongoing production process, as “discarded material” under EPA’s 1985 rule defining RCRA “solid waste,” is discussed *infra* notes 265-270 and accompanying text.

<sup>98</sup> *Id.* at 1185-86, 1193.

<sup>99</sup> *Id.* at 1193.

<sup>100</sup> 2003 Preamble, *supra* note 3, at 61,562 (quoting *AMC I*, 824 F.2d at 1178).

reuse in metals recovery can be considered to be solid wastes . . . .  
[A]lso, the Court suggested that materials disposed of and recycled as part of a waste management program are within EPA's jurisdiction.<sup>101</sup>

Furthermore, the court in *AMC I* did not explicitly identify any specific reused secondary materials—in either petroleum refineries or the mining industry—that cannot be classified as “solid waste” under RCRA. However, the court in *AMC I* identified certain secondary materials that are involved in primary metals production, which are, in fact, recycled and reused by petroleum refineries<sup>102</sup> and mining facilities.<sup>103</sup> The recycled secondary materials processed by petroleum refineries that were mentioned by the court in *AMC I* are: (1) various hydrocarbon streams or “fractions” derived from distilling and further processing of crude oil at petroleum refineries, which are not usable in a particular form or state and therefore are returned to another appropriate processing stage in the refining process so that they can be combined or blended to produce products such as gasoline, fuel oil, and lubricating oils; and (2) “the hydrocarbons and materials which escape from a [petroleum] refinery’s production vessels [and which are] gathered and, by a complex retrieval system, returned to appropriate parts of the refining process.”<sup>104</sup> In *AMC I* the court, however, did not state which of these recycled secondary materials cannot be classified as “solid waste” under RCRA.

Another panel of the Circuit Court of Appeals for D.C. subsequently held in 2000 that *AMC I* never decided whether waste waters containing oil, which are produced by petroleum refineries and which undergo a three-step treatment process—including primary treatment to comply with Clean Water Act requirements, as well as to recover reusable oil that is cycled back into production processes at petroleum refineries—prior to ultimate discharge, are RCRA “discarded materials” and “solid waste.”<sup>105</sup> This panel’s decision in *American Petroleum Institute v. Environmental Protection Agency*, stated that *AMC I* “only held that in-process secondary materials are not ‘discarded’ so that EPA could regulate them; we did not address the discard status of any of the particular materials discussed in the briefs” filed in *AMC I*, such as oil-bearing waste

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<sup>101</sup> 68 Fed. Reg. at 61,562 (Mar. 28, 2003) (citations to *AMC I* omitted).

<sup>102</sup> *AMC I*, 824 F.2d at 1181. “Petroleum refineries vary greatly both in respect of their products and their processes. Most of their products, however, are complex mixtures of hydrocarbons produced through a number of interdependent and sometimes repetitious processing steps. In general, the refining process starts by ‘distilling’ crude oil into various hydrocarbon streams or ‘fractions.’ The ‘fractions’ are then subjected to a number of processing steps. Various hydrocarbon materials derived from virtually all stages of processing are combined or blended in order to produce products such as gasoline, fuel oil, and lubricating oils.” *Id.*

<sup>103</sup> *Id.* “In the mining industry, primary metals production involves the extraction of fractions of a percent of a metal from a complex mineralogical matrix (i.e., the natural material in which minerals are embedded). Extractive metallurgy proceeds incrementally . . . [because] all metal cannot be extracted in one fell swoop. In consequence, materials are reprocessed in order to remove as much of the pure metal as possible from the natural ore.” *Id.*

<sup>104</sup> *Id.*

<sup>105</sup> *Am. Petroleum Institute v. EPA*, 216 F.3d 50, 56 (D.C. Cir. 2000).

waters.<sup>106</sup> Refineries argued in *American Petroleum Institute* that recovery of oil from oil-bearing wastewater during such primary treatment is a part of in-process production processes at petroleum refineries, while EPA argued that such primary treatment is a step in the act of discarding such waste water that is primarily for purposes of Clean Water Act wastewater treatment requirements.<sup>107</sup> The court in *American Petroleum Institute* remanded the issue to EPA in order for the agency to further explain why it finds oil-bearing wastes at refineries to be RCRA “solid waste,” when the refineries engage in such primary treatment partly to recover oil, which is then recycled back into refinery production processes.<sup>108</sup>

In *AMC I* the court had identified the following recycled secondary materials processed by mining facilities which are involved in primary metals production: (1) natural mineralogical ore materials that are reprocessed after earlier extraction processes, as part of a mining facility’s primary metals production processes, to extract additional metal; and (2) “valuable metal-bearing and mineral-bearing dusts [that] are often released in processing a particular metal” and which are recaptured, recycled and reused by a mining facility as part of its processes to extract a particular metal (“frequently in production processes different from the one from which the dusts were originally emitted”).<sup>109</sup> The court in *AMC I*, however, did not state which of these recycled secondary materials cannot be classified as “solid waste” under RCRA.

However, in *AMC I*, all of these secondary materials mentioned by the court, which are recycled and reused at petroleum refineries and at primary metals production mining facilities, are materials that are recycled and reused within an ongoing manufacturing or production process of the industrial facility that generated the secondary materials. Some of these reused secondary materials are not reused in the same manufacturing or production equipment process at the facility that generated them. Furthermore, apparently none of the recycled secondary materials mentioned in *AMC I* were recycled in a “closed-loop” system, where a secondary material is returned as a raw material substitute to the original manufacturing process which generated the secondary materials<sup>110</sup> “with no intermediate storage.”<sup>111</sup> However, if any of the recycled secondary materials mentioned in *AMC I* are recycled through such a “closed-loop” system, they are considered by EPA regulations<sup>112</sup> to be excluded from RCRA’s definition of “solid waste.”<sup>113</sup>

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<sup>106</sup> *Id.*

<sup>107</sup> *Id.* at 57.

<sup>108</sup> *Id.* at 58. EPA has stated that this decision “found that EPA potentially had jurisdiction over oil-bearing wastewaters recycled at petroleum refineries, although in the rule under review EPA failed to provide a rational basis for asserting jurisdiction.” 2003 Preamble, *supra* note 3, at 61,562.

<sup>109</sup> *AMC I*, 824 F.2d at 1181.

<sup>110</sup> *Id.* at 1180.

<sup>111</sup> *Association of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1053 (D.C. Cir. 2000).

<sup>112</sup> 40 C.F.R. § 261.2(e)(1)(iii).

<sup>113</sup> *AMC I*, 824 F.2d at 1180. The EPA regulation which excludes materials recycled through a “closed-loop” system from the definition of RCRA “solid waste” is discussed in more detail *infra* notes 244-245 and accompanying text.

The court's italicized reference in *AMC I* to secondary materials "*destined for beneficial reuse or recycling in a continuous process by the industry itself*"<sup>114</sup> might be interpreted as implying that recycled secondary materials, in order not to be considered RCRA "solid waste" under *AMC I*, must be recycled by the same industrial facility, business or person that generated them, and not by another business facility or by another person's recycling or reclamation facility or business. As discussed below, some subsequent court decisions and the EPA have interpreted *AMC I* in this manner.

The *AMC I* court's decision neither defined "industry" for purposes of this continuous process principle nor provided any criteria or factors to be used by courts or EPA in interpreting "industry" for purposes of this principle in particular situations.<sup>115</sup> Furthermore, the court in *AMC I* did not state whether recycled secondary materials, in order not to be considered RCRA "solid waste," have to be recycled into the same process, equipment or building (facility) that generated the secondary materials, or can be recycled and reclaimed in a single recycling process or multiple recycling processes or in pieces of equipment or a building that is different than the one which generated the secondary materials being recycled. The court in *AMC I* also never stated whether secondary materials that are generated in a particular piece of equipment or building at a particular geographical site can be recycled and reclaimed at another facility or complex, which is either owned by the materials' generator or owned by another person that is located at another, non-contiguous geographical site.<sup>116</sup>

However, as discussed below,<sup>117</sup> the subsequent decision by a panel of the DC Circuit Court of Appeals in *Association of Battery Recyclers, Inc. v. Environmental Protection Agency*<sup>118</sup> suggests that RCRA "solid waste" does not include secondary materials, which the generating business or industry recycles, reclaims or reuses at a multi-building industrial complex in a process, piece of equipment, or building that is different from that which generated the secondary materials. *AMC I*, however, gave no indication whether secondary materials are considered "solid waste" under RCRA when they are generated at a particular industrial facility or complex and sent to another facility or complex within the same industrial category for reclamation or reuse at a different, non-contiguous site (i.e., separate from the site of the generating facility or complex), either (a) where the generating facility and reclamation or reuse facility are owned by the same person

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<sup>114</sup> *Id.* at 1186.

<sup>115</sup> As discussed *infra* notes 281-283 and accompanying text, EPA in 2003 proposed defining "industry" on the basis of 4-digit industry codes under the North American Industry Classification system (NAICS) developed by the Office of Management and Budget, 72 Fed. Reg. at 61567-75 (March 28, 2003), for purposes of a proposed rule designed to comply with the holding in *AMC I*.

<sup>116</sup> As discussed *infra* notes 382-414 and accompanying text, EPA's new 2008 final rules defining solid waste under Subtitle C of RCRA exempt certain hazardous secondary materials, which are recycled off-site at a different facility than the facility which generated the materials, from the RCRA Subtitle C definition of "solid waste."

<sup>117</sup> *Infra* notes 120-135 and accompanying text.

<sup>118</sup> 208 F.3d 1047, 1053 (D.C. Cir. 2000).

or company or (b) where the two are owned and operated by various people or companies.

*AMC I* also never stated whether its requirement (for a continuous ongoing manufacturing or production process for immediate reuse of recycled secondary materials) permits those recycled materials to be temporarily stored at the facility prior to being reused in the facility's ongoing production processes or to be reclaimed, regenerated, filtered, or otherwise treated, either to restore certain properties or to remove impurities, prior to being reused within a facility's ongoing manufacturing or production processes. In a 1993 decision, also subsequent to the *AMC I* decision, the Fourth Circuit Court of Appeals suggested that no such storage or treatment of a recycled secondary material would be permitted under *AMC I*, by stating "that the fundamental inquiry in determining whether a by-product has been 'discarded' is whether the by-product is *immediately* recycled for use in the same industry; if not, then the by-product is justifiably seen as 'part of the waste disposal problem,' . . . and therefore is a 'solid waste.'"<sup>119</sup>

The DC Circuit Court of Appeals in 2000 held otherwise in *Association of Battery Recyclers, Inc. v. Environmental Protection Agency*,<sup>120</sup> finding that the "immediate reuse" standard of *AMC I* only requires "direct" recycling and reuse, not recycling and reuse "at once" or "forthwith."<sup>121</sup> The court in *Association of Battery Recyclers* held that a "secondary material [that] is destined for reuse as part of a continuous industrial process . . . is not abandoned or thrown away"<sup>122</sup> and therefore is not either a "discarded material" or RCRA "solid waste." EPA noted in 2003 that *Association of Battery Recyclers* followed *AMC I* and "repeated that materials reused within an ongoing industrial process are neither disposed of [n]or abandoned."<sup>123</sup>

The court in *Association of Battery Recyclers* also held that *AMC I* permits secondary materials to be "held or stored for later recycling or reuse,"<sup>124</sup> and rejected EPA's assertion that "immediate reuse" under *AMC I* requires "'continuous recirculation of secondary materials back into recovery processes without prior storage' unless the storage for later recycling complies with the conditions EPA sets forth in ... [40 C.F.R.] § 261.4(a)(17) . . . ."<sup>125</sup> *Association of Battery Recyclers* involved an EPA rule<sup>126</sup> [the "LDR Phase IV rule"]

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<sup>119</sup> *Owen Electric Steel Co. v. Browner*, 37 F.3d 146, 150 (4th Cir. 1994) (citation to *AMC I* omitted).

<sup>120</sup> 208 F.3d 1047 (D.C. Cir. 2000).

<sup>121</sup> *Id.* at 1053.

<sup>122</sup> *Id.* at 1056.

<sup>123</sup> 2003 Preamble, *supra* note 3, at 61,563.

<sup>124</sup> 208 F.3d at 1053.

<sup>125</sup> *Id.* 40 C.F.R. § 261.4(a)(17) classifies certain recycled secondary materials from the primary mineral processing industry as not being RCRA Subtitle C "solid waste" provided that they are stored in tanks, containers or buildings meeting minimum integrity standards and are "designed, constructed and operated to prevent significant releases to the environment of those [stored] materials."

<sup>126</sup> Land Disposal Restrictions Phase IV, 63 Fed. Reg. 28,556 (May 26, 1998) (to be codified at 40 C.F.R. pts. 148, 261, 266, 268, 271).

adjusting [EPA's] Subtitle C jurisdiction over materials recycled by reclamation within the mineral processing industry . . . . In that rule, EPA promulgated a conditional exclusion for all types of mineral processing materials destined for reclamation. EPA imposed a condition prohibiting land-based storage prior to reclamation because it considered secondary materials from the mineral processing industry that were stored on the land to be part of the waste disposal problem . . . . The conditional exclusion decreased regulation over spent materials stored prior to reclamation, but increased regulation over by-products and sludges that exhibit a hazardous characteristic, and that are stored prior to reclamation. EPA noted that the statute does not authorize it to regulate "materials that are destined for immediate reuse in another phase of the industry's ongoing production process." EPA, however, took the position that materials that are removed from a production process for storage are not "immediately reused," and therefore are "discarded."<sup>127</sup>

The panel's decision in *Association of Battery Recyclers* "vacated the provisions that expanded jurisdiction over characteristic by-products and sludge destined for reclamation."<sup>128</sup>

EPA has conceded that the court's decision in *Association of Battery Recyclers* "did not hold that storage before reclamation automatically makes materials 'discarded.'"<sup>129</sup> The panel's decision suggests, however, that storage of a recycled secondary material can only be "temporary," by stating that "temporary storage can be a necessary phase of reclaiming mineral processing secondary material,"<sup>130</sup> but the decision does not either define "temporary" or state any maximum time limit for storage during recycling. The court did note one example of a particular recycled secondary material ("reverts, a mixture of 'converter slag and matte which has frozen to the wall, and bottom of a transfer ladle'. . ."<sup>131</sup>) which might have to be stored for more than forty-eight hours "to cool sufficiently to allow equipment to move it to the crushing and sizing operations."<sup>132</sup> This example suggests that "temporary" storage for more than forty-eight hours may be permitted for the recycling of secondary materials when such storage is a necessary

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<sup>127</sup> 2003 Preamble, *supra* note 3; 68 Fed. Reg. at 61,562-63.

<sup>128</sup> *Id.* at 61,563. In a final rule published at 67 Fed. Reg. 11251 (March 13, 2002) (to be codified at 40 C.F.R. pt 261), EPA removed from its RCRA regulations the byproduct and sludge provisions of the 1998 mineral processing exclusion that the court vacated in *Ass'n of Battery Recyclers*, 208 F.3d 1047 (D.C. Cir. 2000).

<sup>129</sup> 68 Fed. Reg. at 61,563. "Rather, it held that 'at least some of the secondary material EPA seeks to regulate as solid waste (in the mineral processing rule) is destined for reuse as part of a continuous industrial process and thus is not abandoned or thrown away.'" *Id.* (quoting *Ass'n of Battery Recyclers*, 208 F.3d at 1056).

<sup>130</sup> 208 F.3d. at 1054 n.2.

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

part of the particular recycling operation, without that recycled secondary material being considered RCRA “solid waste.”

The D.C. Circuit Court of Appeals’ decision in *Association of Battery Recyclers* also suggests that recycled secondary material can be regenerated, filtered, or otherwise “treated” during recycling, to restore a material’s original properties or to remove certain materials or impurities from the secondary material, by stating that the court in [AMC I] “set aside EPA’s rule because secondary materials which are treated prior to recycling [could] not be considered discarded [under the invalidated EPA rule] if they are ‘reused within an ongoing industrial process.’”<sup>133</sup> The court did not define what types of “treatment” of recycled secondary materials are permissible under *AMC I*, but the court cited as an example a mining facility capturing emission control dust from a primary zinc smelting furnace and returning the dust to on-site cadmium recovery operations before returning the dust to a primary zinc smelting furnace as a recycled secondary material, which EPA could not define to be an RCRA “discarded material” and “solid waste.”<sup>134</sup> Although the court never explained its reasoning, this example appears to involve treating emission control dust containing both zinc and cadmium, which is first sent to cadmium recovery operations to remove the cadmium, with the residue remaining from such operations containing only zinc then returned to a primary zinc smelting furnace for further processing of the zinc residue.

Prior to its discussion of this example, the court also suggested that secondary materials recycled and reused in a continuous manner in a different production process from the process that generated the secondary materials are not “discarded” materials that are “solid waste” under RCRA. The court stated that “the *AMC I* court thought that EPA’s final rule illegally regulated the following: ‘valuable metal-bearing and mineral-bearing dusts are often released in processing a particular metal. The mining facility typically recaptures, recycles, and reuses these dusts, frequently in production processes different from the one from which the dusts were originally emitted.’”<sup>135</sup>

As a result, under *AMC I* and *Association of Battery Recyclers*, “solid waste” under RCRA does not include either secondary materials recycled by an industrial facility, which is defined as a particular building or a multi-building industrial complex located at a particular geographical location, through a closed-loop system or secondary materials recycled and reused within that same industrial facility’s ongoing manufacturing or production processes, even if the materials are recycled or reused in a production process different from the process that generated the materials and even if the materials, prior to being recycled and reused, are temporarily stored or reclaimed, treated, or filtered to remove unwanted materials or impurities. However, it is unclear from these two decisions whether under RCRA secondary materials that are generated at one industrial facility but that are

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<sup>133</sup> *Id.* at 1054 (quoting *AMC I*, 824 F.2d at 1182).

<sup>134</sup> *Ass’n of Battery Recyclers*, 208 F.3d at 1053-54.

<sup>135</sup> *Id.* at 1053 (quoting *AMC I*, 824 F.2d at 1181).



recycled or reused at another industrial facility, which is located at another non-contiguous location and which is owned or operated by the person or business that owns or operates the generating facility, are RCRA "solid waste."

But another decision, *Safe Food and Fertilizer v. Environmental Protection Agency*,<sup>136</sup> has indicated that in certain circumstances secondary materials that are generated by one industrial facility and recycled, reclaimed or reused by a different facility, which is owned and operated by a different person from the one owning and operating the generating facility and which is within a different industrial category, may be classified as *not* a "discarded material" that is RCRA "solid waste." In *Safe Food and Fertilizer*, D.C. Circuit Court of Appeals stated that "we have never said that RCRA compels the conclusion that material destined for recycling in another industry is necessarily 'discarded,'"<sup>137</sup> although the court also stated that "[w]e have also held that materials destined for future recycling by another industry may be considered 'discarded'; the statutory definition [of solid waste under RCRA] does not preclude application of RCRA to such materials if they can reasonably be considered part of the waste disposal problem."<sup>138</sup> The court stated in *Safe Food and Fertilizer* that "[a]lthough ordinary language seems inconsistent [in] treating immediate reuse within an industry's ongoing industrial process as a 'discard,' . . . the converse is not true. As firms have ample reason to avoid complete vertical integration . . . , firm-to-firm transfers are hardly good indicia of discard."<sup>139</sup>

The court in *Safe Food and Fertilizer* therefore upheld an EPA rule,<sup>140</sup> which provides that hazardous recycled secondary materials used to make zinc fertilizers—many of which are materials produced by other industries, not by the fertilizer production industry<sup>141</sup>—and the fertilizers themselves when applied to land, are not considered "discarded" materials and "solid waste" under subtitle C of RCRA, if those recycled materials are not speculatively accumulated, as defined by 40 C.F.R. § 261.1(c)(8); if the generators and intermediate handlers of these secondary materials and the zinc fertilizer manufacturers that use recycled secondary materials to produce fertilizers meet specified reporting and storage requirements, which are designed to "prevent releases of the secondary materials into the environment";<sup>142</sup> and if the fertilizers themselves have levels of certain specified metals that are below EPA-promulgated maximum concentration levels

<sup>136</sup> 350 F.3d 1263 (D.C. Cir. 2003), *petition for reconsideration granted in part and remanded to EPA for more detailed explanation*, 365 F.3d 46 (D.C. Cir. 2004).

<sup>137</sup> 365 F.3d 46; 350 F.3d at 1268.

<sup>138</sup> *Id.*, citing *Am. Petroleum Institute v. EPA*, 906 F.2d 729 (D.C. Cir. 1990) (discussed *infra* notes 157-66 and accompanying text) and *Am. Mining Cong. v. EPA (AMC I)*, 907 F.2d 1179 (D.C. Cir. 1990) (discussed *infra* notes 176-82 and accompanying text).

<sup>139</sup> 350 F.3d at 1268 (citations omitted).

<sup>140</sup> 40 C.F.R. § 261.4(a)(20) (2008); 67 Fed. Reg. 48393 (July 24, 2002) (to be codified at 40 C.F.R. pt.'s 261, 266, 268, 271).

<sup>141</sup> 2007 Preamble, *supra* note 3, at 14,177.

<sup>142</sup> See 40 C.F.R. § 261.4(a)(20)(ii)(B) (2008).

for those metals.<sup>143</sup> The rule and its “conditions apply to a number of recycled materials not produced in the fertilizer production industry, including certain zinc-bearing hazardous secondary materials such as brass foundry dusts.”<sup>144</sup> The court in *Safe Food and Fertilizer* stated that EPA had classified these recycled secondary materials as not being RCRA “solid waste” upon the grounds that “market participants treat the exempted materials more like valuable products than like negatively-valued wastes, managing them in ways inconsistent with discard” in compliance with EPA-prescribed management practices, and that these fertilizers produced with recycled secondary materials are “chemically indistinguishable from analogous commercial products made from virgin materials” because they must meet EPA limits on metal contaminants.<sup>145</sup>

The court held in *Safe Food and Fertilizer* that it is reasonable for EPA to distinguish under RCRA between products and discarded wastes based upon the identity principle, when used in conjunction with indicators like market valuation and management practices.<sup>146</sup> (The “identity principle” holds that fertilizers produced from recycled materials, which have contaminant levels “below specified limits” such that “recycled products meeting these regulations would have environmental impacts substantially similar to those of analogous products made from virgin materials, could lawfully be classified as not being RCRA solid waste.”<sup>147</sup>) EPA has noted that the court in *Safe Food and Fertilizer*

specifically stated that it “need not consider whether a material could be classified as a non-discarded [material] exclusively on the basis of the market-participation theory.” . . . The court only determined that the combination of market participants’ treatment of the materials, EPA required management standards and the “identity principle” are a reasonable set of tools to establish that the recycled secondary materials and fertilizers are not discarded.<sup>148</sup>

The court further stated in *Safe Food and Fertilizer* that because “virgin materials and feedstocks used to produce such feedstocks are products rather than wastes . . . , it seems eminently reasonable to treat materials that are indistinguishable in the relevant respects as products as well.”<sup>149</sup> But the court held that EPA’s identity principle does not require “literal identity so long as the

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<sup>143</sup> The court in *Safe Food and Fertilizer* upheld this EPA regulation under *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984), as a reasonable interpretation of an issue under RCRA that the statute does not resolve, 350 F.3d at 1268, with the court stating that the “statutory text does not preclude EPA’s reading.” *Id.* at 1269.

<sup>144</sup> 2007 Preamble, *supra* note 3, at 14,177.

<sup>145</sup> *Safe Food and Fertilizer*, 350 F.3d at 1269.

<sup>146</sup> *Id.* The court subsequently stated that it “upheld this so-called ‘identity principle’—together with market valuation and EPA-required management practices—as a valid standard for distinguishing waste from non-waste.” 365 F.3d at 47.

<sup>147</sup> *Safe Food and Fertilizer*, 365 F.3d at 47.

<sup>148</sup> 2007 Preamble, *supra* note 3, at 14,178.

<sup>149</sup> 350 F.3d at 1269.

differences are so slight as to be substantially meaningless.”<sup>150</sup> The court noted that although the maximum permissible amounts of heavy metal contaminants in fertilizers made with recycled secondary materials are higher than the levels of heavy metal contamination found in commercial fertilizers made with virgin feedstocks, EPA’s position was “that the differences in contaminant levels between virgin and recycled fertilizers are trivial when viewed in the perspective of real risks to health and the environment.”<sup>151</sup> The court therefore held that these differences “are not so large as to undermine EPA’s application of its identity principle” to risks to human health and the environment because EPA’s maximum concentration limits for heavy metals other than chromium were “considerably below” levels at which human health and the environment are endangered.<sup>152</sup> The court further held that the agency “could reasonably find that the differences between EPA’s contaminant limits [for fertilizers produced with recycled materials] and the contaminant limits found in virgin products were insignificant” and that the agency was “justified” in finding “that risks from virgin and recycled materials were, for all practical purposes, identical.”<sup>153</sup>

By contrast, two other court decisions<sup>154</sup> have held that in certain situations spent or by-product materials, as well as thrown-away consumer products, are RCRA “solid waste” when sent by the owners or possessors of the materials or products to a separate reclamation facility for reclamation and recovery of valuable materials. *American Petroleum Institute v. Environmental Protection Agency*,<sup>155</sup> which was cited in *Safe Food and Fertilizer* for the proposition “that materials destined for future recycling by another industry *may* be considered ‘discarded’ . . . if they can reasonably be considered part of the waste disposal problem,”<sup>156</sup> involved solid wastes generated by the steel industry that were reclaimed at separate facilities that were within another industry, which in a scenario typical to that industry would involve primary zinc smelting or some other type of secondary metal recovery.<sup>157</sup>

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<sup>150</sup> *Id.*

<sup>151</sup> 365 F.3d at 49.

<sup>152</sup> 350 F.3d at 1270. The court in *Safe Food and Fertilizer* remanded to EPA for further explanation by EPA of its chromium limitation, because the chromium limitation was “well above” maximum amounts of chromium found in zinc fertilizers produced with virgin feedstocks and EPA had not identified anything in its administrative record “indicating that these differences in chromium concentrations are trivial from a health and environmental perspective.” *Id.* at 1271. The court also subsequently granted in part a petition for reconsideration and remanded to EPA for further explanation of the extent to which its decision, to classify recycled materials used to produce zinc fertilizers and the fertilizers themselves as not being RCRA “solid waste,” was based upon particular studies and data submitted by an industry trade association. *Safe Food and Fertilizer v. EPA*, 365 F.3d 46 (D.C. Cir. 2004).

<sup>153</sup> *Id.* at 49.

<sup>154</sup> See *Am. Petroleum Institute v. EPA* 906 F.2d 729 (D.C. Cir. 1990); *United States v. ILCO*, 996 F.2d 1126 (11th Cir. 1993).

<sup>155</sup> 906 F.2d 729.

<sup>156</sup> *Safe Food and Fertilizer*, 350 F.3d at 1268.

<sup>157</sup> *Ass’n of Battery Recyclers, Inc.*, 208 F.3d at 1054.

The *American Petroleum Institute* court did not state that the person who owned and operated the generating steel industry facility was a different person than the one who owned and operated the secondary metal recovery facility; but because the court made no mention of the two facilities having a common owner or operator, the owner and operator of the generating facility probably was a different from the owner and operator of the secondary metal recovery facility. The court held in *American Petroleum Institute* that EPA had relied upon a “flawed interpretation” of its authority under RCRA in ruling that K061 zinc-bearing listed hazardous slag, which emanates from the primary production of steel in electric furnaces, is not RCRA “solid waste” when the slag is sent to a metal reclamation smelter facility to recover zinc; the court remanded to EPA for further reconsideration of the issue.<sup>158</sup> The court stated, however, that “it appears likely that EPA will recognize that [K061 slag is “solid waste” under RCRA and that] it must comply with its statutory mandate to prescribe treatment standards for the disposal of K061 slag.”<sup>159</sup> The court noted in *American Petroleum Institute* that “[a]lthough it is undisputed that K061 is a ‘solid waste’ when it leaves the electric furnace in which it is produced, EPA concludes that K061 ceases to be a ‘solid waste’ when it arrives at a metal reclamation facility because at that point it is no longer ‘discarded material.’”<sup>160</sup> The court noted, however, in its decision in *American Petroleum Institute* that:

[u]nlike the materials in question in *AMC [I]*, K061 is indisputably “discarded” *before* being subject to metals reclamation. Consequently, it *has* “become part of the waste disposal problem”; that is why EPA has the power to require that K061 be subject to mandatory metals reclamation.... Nor does anything in *AMC [I]* require EPA to cease treating K061 as “solid waste” once it reaches the metals reclamation facility. K061 is delivered to the facility not as part of an “ongoing manufacturing or industrial process” within “the generating industry,” but as part of a mandatory waste treatment plan prescribed by EPA.<sup>161</sup>

*American Petroleum Institute* thus is distinguishable from *Safe Food and Fertilizer* in two respects. First, EPA did not assert in *American Petroleum Institute* that the recycled secondary material in question—K061 produced by steel manufacturers—is not “discarded material.” Second, unlike *Safe Food and Fertilizer*, *American Petroleum Institute* did not involve the use of recycled secondary materials to produce a product that is identical to a product produced from virgin materials. Instead, *American Petroleum Institute* involved a reclamation facility with the apparent sole purpose of accepting discarded secondary materials from other industrial facilities and reclaiming valuable materials from materials that have been discarded by other industries. *American*

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<sup>158</sup> 906 F.2d at 739.

<sup>159</sup> *Id.* at 742.

<sup>160</sup> *Id.* at 740.

<sup>161</sup> *Id.* at 741.

*Petroleum Institute* also indicated that EPA is authorized under RCRA to regulate facilities that utilize “processes for extracting valuable products from discarded materials that qualify as hazardous wastes,”<sup>162</sup> under EPA’s authority under section 3004<sup>163</sup> of RCRA to regulate a facility engaged in “treatment” of RCRA hazardous wastes. EPA has interpreted the *American Petroleum Institute* decision as holding “that emission control dust from steel making operations listed as hazardous waste ‘KO61’ is a solid waste, even where sent to a metals reclamation facility, at least where that is the treatment method required under EPA’s [RCRA] land disposal restrictions program.”<sup>164</sup>

In *United States v. ILCO*,<sup>165</sup> another case distinguishable from *Safe Food and Fertilizer*, the Eleventh Circuit Court of Appeals held that automobile and truck batteries obtained from commercial suppliers by a reclamation facility were recycled by the facility to produce lead ingots from lead plates reclaimed from the recycled batteries and were RCRA “solid waste.”<sup>166</sup> The *ILCO* court did not explain why the batteries supplied to the reclamation facility by commercial suppliers are “discarded material” under RCRA. The batteries obtained by these commercial suppliers arguably are not RCRA “solid waste” prior to the time that the suppliers obtain them,<sup>167</sup> because before then the batteries are drawn from residential household trash and therefore are not “resulting from industrial, commercial, mining [or] agricultural operations, [or] from community activities” as required by RCRA’s definition of “solid waste.”<sup>168</sup> Earlier, the batteries had been thrown away and therefore were “discarded” by consumers. But when the commercial supplier provided “discarded” batteries to the reclamation facility, the discarded batteries “result[ed] from commercial operations” within the meaning of RCRA’s definition of “solid waste” and the batteries therefore can be classified as RCRA “solid waste” when obtained by the reclamation facility.<sup>169</sup> Nevertheless, in

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<sup>162</sup> *Id.* at 741 n.16.

<sup>163</sup> 42 U.S.C. § 6924 (2006).

<sup>164</sup> 2003 Preamble, *supra* note 3, at 61,562.

<sup>165</sup> *United States v. ILCO*, 996 F.2d 1126 (11th Cir. 1993).

<sup>166</sup> *Id.* at 1132; L.E.A.D. Group of Berks v. Exide Corp., 1999 U.S. Dist. LEXIS 2672, at \*20 (E.D. Pa. 1999), followed *ILCO* in a RCRA citizen suit under 42 U.S.C. § 6972(a)(1)(B), to hold that spent lead-acid batteries and lead scrap, that are used in secondary lead smelting operations, are RCRA “solid waste.” *Cal. Dept. of Toxic Substances Control v. Interstate Non-Ferrous Corp.*, 298 F. Supp. 2d 930, 975, 977, 978 (E.D. Cal. 2003), similarly held that reclaimed and recycled lead-acid battery parts, scrap metal brought to a secondary metal reclamation facility, and leftover ash byproduct frequently sold to others for use in fertilizers, are RCRA “solid waste.”

<sup>167</sup> The court’s decision in *ILCO* does not state how the commercial suppliers obtained the batteries they supplied to the reclamation facility. The suppliers may have obtained some batteries directly from their original consumer owners, but probably obtained most of them either from gasoline service stations which obtained them from consumers who left them after purchasing a new battery, or from residential trash collectors or sanitary landfills which received them from the original owners who left them with trash for collection or otherwise threw them away.

<sup>168</sup> 42 U.S.C. § 6903(27) (2006). 42 U.S.C. § 6903(27) is set forth *supra* in the text accompanying notes 63-65.

<sup>169</sup> EPA has stated that “the RCRA-regulated ‘generator’ of a [spent lead-acid battery] is often the garage or junkyard that removed the battery from the automobile (rather than the original owner who discarded the battery) . . . .” 2008 Preamble, *supra* note 34, at 64,714.

support of its holding, the court in *ILCO* stated that “it is unnecessary to read into the word ‘discarded’ a congressional intent that the waste in question must finally and forever be discarded . . . . It is perfectly reasonable for EPA to assume that Congress meant ‘discarded once.’”<sup>170</sup> The *ILCO* court also stated that “[p]reviously discarded solid waste, although it may at some point be recycled, nonetheless remains solid waste,”<sup>171</sup> and that “[t]his fact does not change just because a reclaimer has purchased or finds value in the components.”<sup>172</sup>

The crucial element of the Eleventh Circuit’s reasoning [in *ILCO*] is that the batteries become, in the words of *AMC I*, “part of the waste disposal problem,” as soon as the various owners of the batteries discarded them. That *ILCO*, a third party, then agreed to recycle the batteries, thereby, at least in some sense, ameliorating the waste disposal problem, is irrelevant in the sense that that subsequent act does not divest the EPA of jurisdiction over the wastes. In other words, once the batteries were discarded, they became classified as solid waste; subsequent treatment is irrelevant.<sup>173</sup>

Under *American Petroleum Institute* and *ILCO*, spent secondary materials or products that have been thrown away or disposed of—rather than placed either into an intra-industry direct continuous recycling process (as defined by *AMC I*) or into an inter-industry recycling process that meet the identity, market valuation and management principles upheld in *Safe Food and Fertilizer* and that are then transferred from the industrial or commercial facility that generated or collected the materials or products to a reclamation facility owned and operated by a different person than the person who owns and operates the generating facility—are RCRA “solid waste,” even when those secondary materials are recycled by that reclamation facility to reclaim commercially valuable materials from these recycled secondary materials.<sup>174</sup> “The point of . . . [*American Petroleum Institute*] is that once material qualifies as ‘solid waste,’ something derived from it retains that designation even if it might be reclaimed and reused at some future time.”<sup>175</sup>

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<sup>170</sup> 996 F.2d at 1132.

<sup>171</sup> *Id.* The court added that “their secondary character as recyclable material is irrelevant” to the determination that these recycled batteries and their contents are RCRA “discarded material.” *Id.* EPA has described the *ILCO* decision as holding “that EPA has authority over at least some materials destined for reuse rather than final discard.” 2003 Preamble, *supra* note 3, at 61,562.

<sup>172</sup> 996 F.2d at 1131. The court consequently held that EPA can regulate the reclaimer’s activities in producing ingots from recycled automobile batteries under EPA’s authority under RCRA to regulate facilities engaged in the “treatment” of hazardous waste. *Id.*

<sup>173</sup> *Owen Electric Steel Co. v. Browner*, 37 F.3d 146, 150 n.4 (4th Cir. 1994).

<sup>174</sup> Another example of such a situation is discarded used oils that are collected and distilled by oil recyclers, who “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.’” *AMC I*, 824 F.2d at 1187 n.14 (dictum).

<sup>175</sup> *Ass’n of Battery Recyclers, Inc.*, 208 F.3d at 1056 (footnote omitted).

In an extension of this principle, the D.C. Circuit Court of Appeals in 1990 held in *American Mining Congress v. Environmental Protection Agency*<sup>176</sup> (*AMC I*) that the holding in *AMC I* did not exempt from RCRA's definition of "solid waste" secondary or by-product materials that *could be* recycled and reused by the facility that generated the materials, on the ground that *AMC I* "concerned only materials that are 'destined for *immediate reuse* in another phase of the industry's ongoing production process,' . . . and that 'have not yet become part of the waste disposal problem,' . . ."<sup>177</sup> The court in *AMC II* held that "nothing" in the *AMC I* decision prevented EPA from considering sludge, which precipitates from wastewater from primary smelting operations and which is collected, treated, and disposed of in surface impoundments, to be "discarded materials" and "solid waste" under RCRA, even though the sludge may at some time in the future be reclaimed.<sup>178</sup> The court noted that these wastes "are managed in land disposal units that *are* part of wastewater treatment systems, which *have* therefore become 'part of the waste disposal problem,' and which *are not* part of ongoing industrial processes."<sup>179</sup> The *AMC II* court also observed that the decision in *American Petroleum Institute* "explicitly rejected the very claim that petitioners assert in this case . . . , namely, that under RCRA, potential reuse of a material prevents the agency from classifying it as 'discarded.'"<sup>180</sup> "The point of [this decision] . . . is that once material qualifies as 'solid waste,' something derived from it retains that designation even if it might be reclaimed and reused at some future time."<sup>181</sup> EPA has stated that *AMC II* "held that listed wastes managed in units that are part of wastewater treatment units are discarded materials (and solid wastes), especially where it is not clear that the industry actually reuses the materials."<sup>182</sup>

In 2004, the Ninth Circuit Court of Appeals, in a decision<sup>183</sup> holding that grass straw and stubble, which remain on a field after the cutting of Kentucky bluegrass

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<sup>176</sup> 907 F.2d 1179 (D.C. Cir. 1990).

<sup>177</sup> *Id.* at 1186 (citations and footnotes omitted) (emphasis added by the court).

<sup>178</sup> *Id.* The court also held in *AMC II* that EPA's decision to consider such sludge to be "discarded material" under RCRA was reasonable under *Chevron USA* (467 U.S. at 843) and "consistent with the statutory purposes of RCRA," because "a central focus of RCRA's regime" is the regulation of "hazardous materials in surface impoundments," since material placed in wastewater treatment surface impoundments has a propensity to leak hazardous materials into the environment and thus threaten human health and the environment. 907 F.2d at 1187. *Owen Electric Steel Co.*, 37 F.3d at 150, similarly held that EPA did not abuse its discretion in finding that slag resulting from steel production processes, which sits on land untouched for approximately six months before being sold to other entities for use in road construction, is RCRA "discarded material" and "solid waste." EPA has referred to the *Owen Electric Steel Co.* decision as holding "that EPA has authority over at least some materials destined for reuse rather than final discard." 2003 Preamble, *supra* note 3, at 61,562.

<sup>179</sup> 907 F.2d at 1186 (emphasis in original).

<sup>180</sup> *Id.*

<sup>181</sup> *Ass'n of Battery Recyclers, Inc.*, 208 F.3d 1047, 1056 (D.C. Cir. 2000) (footnote omitted).

<sup>182</sup> 2003 Preamble, *supra* note 3, at 61,562.

<sup>183</sup> *Safe Air for Everyone v. Meyer*, 373 F.3d 1035 (9th Cir. 2004). This case was a RCRA citizen suit under 42 U.S.C. § 6972(a)(1)(B) (2006) seeking an injunction that would ban open burning of bluegrass straw and stubble (which were alleged to be RCRA "solid waste") which are left in fields after the harvesting of bluegrass seed from fields. The court in this case did not address the

to harvest bluegrass seed, are not RCRA “solid waste,” identified three factors that courts should apply in determining whether the straw and stubble residue from bluegrass harvesting is RCRA “solid waste”:

(1) whether the material is “destined for beneficial reuse or recycling in a continuous process by the generating industry itself,” . . . ;(2) whether the materials are being actively reused, or whether they merely have the *potential* of being reused . . . ; (3) whether the materials are being reused by [their] . . . original owner, as opposed to use by a salvager or reclaimer . . . .<sup>184</sup>

The court analyzed the evidence about the benefits provided to bluegrass growers and seed harvesters from grass straw and stubble burning and concluded that they are not RCRA “solid waste” because the burning of the stubble and straw provide a number of benefits to bluegrass growers and seed harvesters, including providing fertilizer/nutrients to the fields, enhancing the productive life of bluegrass fields, increasing adsorption of sunlight on the fields and decreasing the amounts of pesticides that need to be used on the fields.<sup>185</sup> The court therefore concluded that the “undisputed evidence” that bluegrass growers “reuse the grass residue in a continuous farming process effectively designed to produce Kentucky bluegrass” established that the stubble and straw grass residue is not abandoned or given up and that the residue therefore is not RCRA “discarded material.”<sup>186</sup> The court also stated that its finding was also supported by factual evidence indicating

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issue of whether persons who burn bluegrass straw and stubble are “generators” of RCRA hazardous wastes who are subject either to citizen suits under 42 U.S.C. § 6972(a)(1)(B) (2006) or to regulation by EPA under section 3002, 42 U.S.C. § 6922 (2006), of RCRA. However, gaseous air pollutants emitted into ambient air as a result of the burning of bluegrass stubble and straw would be non-contained gases which cannot be an RCRA “solid waste” under 42 U.S.C. § 6903(27) (2006), so persons who burn bluegrass stubble and straw would be “generators” of RCRA solid or hazardous waste only if either solid particulate matter emitted into the ambient air or ash resulting from such burning was held to be an RCRA solid or hazardous waste.

<sup>184</sup> *Safe Air for Everyone*, 373 F.3d at 1043. The majority in *Safe Air for Everyone* also noted, citing *Conn. Coastal Fishermen's Ass'n. v. Remington Arms Co.*, 989 F.2d 1305 (2d Cir. 1993), that the length of time materials accumulate may be important to some courts in determining whether the materials are RCRA “solid waste.” 373 F.3d at 1042 n. 5. In *Connecticut Coastal*, the court held, “[w]ithout deciding how long materials must accumulate before they become discarded,” that lead shot (fired from shotguns at a shooting range at a gun club) and fragments of trap and shoot clay targets at which the lead shot was fired, which had accumulated for over seventy years in nearby Long Island Sound, were RCRA “solid waste.” 989 F.2d at 1316. The court therefore held that it was not necessary to decide whether the lead shot and clay targets became RCRA “discarded material” when the lead shot was fired from a shotgun or at some specific later time. *Id.* The court noted, but did not explicitly adopt, EPA’s argument that the lead shot and clay targets in Long Island Sound are RCRA “discarded material” and “solid waste” because they have “served their intended purpose.” *Id.* See the discussion, *supra* notes 84-92 and accompanying text, of the inclusion within RCRA’s definition of “discarded material” of consumer products only after they have served their intended purpose(s).

<sup>185</sup> *Safe Air for Everyone*, 373 F.3d at 1043-45.

<sup>186</sup> *Id.* at 1045.



that each of the three previously-mentioned factors for determining whether a material is an RCRA "solid waste" indicated that the straw and stubble residue were not RCRA "discarded material."<sup>187</sup> The court also referred to RCRA's legislative history, which indicates that the intent of Congress was that agricultural remnants, which are returned to the soil as fertilizers or soil conditioners, not be considered "solid waste" under RCRA.<sup>188</sup>

### B. RCRA Subtitle C Hazardous Wastes

Under RCRA, a "hazardous waste" (that is, waste whose disposal, treatment and storage are regulated more strictly than disposal of non-hazardous "solid waste") must also be an RCRA "solid waste" that presents specified threats to human health or the environment, because section 1004(5) of RCRA provides that

[t]he term "hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may-

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.<sup>189</sup>

EPA, for purposes of RCRA's Subtitle C "cradle to grave" regulatory program for hazardous waste generators, transporters and TSD facilities, defines RCRA "hazardous waste" as including RCRA solid waste that either meets one or more of four specified characteristics<sup>190</sup>—ignitability, corrosivity, reactivity or toxicity<sup>191</sup>—or that has been listed by EPA in 40 C.F.R. Part 261 subpart D as a RCRA

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<sup>187</sup> *Id.*

<sup>188</sup> *Id.* at 1045-46. Judge Paez, dissenting in *Safe Air for Everyone*, argued that "there [was] a genuine factual dispute as to whether the post-harvest crop residue has been discarded." *Id.* at 1051 (Paez, J., dissenting). He would have remanded the case for trial. *Id.* at 1054. Judge Paez argued that "mere beneficial reuse [does not] mean that a substance has not been discarded under RCRA," *id.* at 1049, and asserted that the bluegrass straw and stubble burnt by bluegrass growers and seed harvesters could be found to be RCRA "discarded material" because the growers "burn the post-harvest crop residue to remove it from the fields . . ." *Id.* at 1048. The majority, however, correctly stated that "[t]he determination of whether grass residue has been 'discarded' is made independently of *how* materials are handled. Despite the fact that a portion of residue becomes airborne smoke, the residue is not thereby automatically 'discarded.'" *Id.* at 1046 n.13. However, as noted *supra* note 183, the persons burning straw and stubble residue might be held to be "generators" of RCRA solid or hazardous wastes (solid particulate matter emitted into the air and ash).

<sup>189</sup> 42 U.S.C. § 6903(5) (1992).

<sup>190</sup> 40 C.F.R. § 261.3(a)(2)(i) (2006).

<sup>191</sup> *See id.* §§ 261.20-.24.

“hazardous waste.”<sup>192</sup> “Any solid waste exhibiting one or more of these characteristics is automatically deemed a ‘hazardous waste’ subject to regulation under Subtitle C of the RCRA, even if it is not a ‘listed’ waste.”<sup>193</sup> “Once a waste is listed or identified as hazardous, its subsequent management is regulated [under RCRA]. Treatment, storage, and disposal of a hazardous waste normally can be undertaken only pursuant to a permit that specifies the conditions under which the waste will be managed.”<sup>194</sup>

#### IV. EPA’S 1980’S REGULATIONS DEFINING “SOLID WASTE” UNDER SUBTITLE C OF RCRA

“EPA’s interpretation of ‘solid waste’ [under RCRA] has evolved over time,”<sup>195</sup> beginning in 1980, when the agency issued an interim rule<sup>196</sup> defining “solid waste” under RCRA to include a material that is “a manufacturing or mining by-product and sometimes is discarded.” This definition excluded “an intermediate manufacturing or mining product which result[ed] from one of the steps in a manufacturing or mining process and [was] typically processed through the next step of the process within a short time.”<sup>197</sup> The definition of “solid waste” under EPA’s 1980 interim rule “essentially” took the position that all secondary materials being recycled are wastes,<sup>198</sup> because the “key feature” of this 1980 interim definition was “that certain materials [were] always solid wastes, irrespective of whether they [were] disposed of or [were] destined for recycling.”<sup>199</sup> This result was due to the fact that the 1980 interim rule’s “sometimes discarded” standard

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<sup>192</sup> *Id.* § 261.3(a)(2)(ii). EPA “has, in turn, established three grounds upon which to list a waste as hazardous, including a finding that the waste contains any of the toxic constituents appearing in 40 C.F.R. pt. 261, App. VIII. See 40 C.F.R. § 261.11(a)(3).” *AMC II*, 907 F.2d at 1182 n.4. “EPA has published several lists of specific hazardous wastes . . . in which EPA has described the wastes and assigned a ‘waste code’ to each one.” *Am. Petroleum Institute*, 906 F.2d at 733. Listed hazardous wastes are produced by a particular specified type of industrial process. *United States v. ILCO, Inc.*, 996 F.2d 1126, 1131 n. 9 (11th Cir. 1993).

40 C.F.R. § 261.3(a)(2)(iv) (referred to as the “mixture rule”) provides, subject to certain specified exceptions, that a solid waste is a hazardous waste if it is a mixture of a solid waste and one or more hazardous wastes listed in subpart D of Part 261 of Title 40 of the Code of Federal Regulations.

40 C.F.R. § 261.3(c)(2)(i) (referred to as the “derived-from rule”) provides, subject to certain specified exceptions, that “. . . any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is hazardous waste. (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.)”

<sup>193</sup> *Am. Petroleum Institute*, 906 F.2d at 733.

<sup>194</sup> *Id.* (citing 42 U.S.C. §§ 6922-6925).

<sup>195</sup> *AMC I*, 824 F.2d at 1179.

<sup>196</sup> 45 Fed. Reg. 33,119 (May 19, 1980).

<sup>197</sup> *Id.*

<sup>198</sup> 1985 Preamble, *supra* note 1, at 616.

<sup>199</sup> 1983 Preamble, *supra* note 26, at 14,475 (emphasis omitted).

classified materials as RCRA solid waste "even if they [were] being recycled in a manner not ordinarily thought of as waste management" and also brought "many product-like materials into the solid waste net—unless the material is never thrown away."<sup>200</sup> The 1980 interim regulation therefore provided EPA "broad jurisdiction over recycled materials and recycling operations, although this [was] tempered by regulating quite narrowly."<sup>201</sup>

Because both EPA and the regulated community found the 1980 interim definition's classification of all recycled secondary materials as RCRA "solid waste" to be unacceptable,<sup>202</sup> EPA in 1983 proposed "narrowing"<sup>203</sup> amendments<sup>204</sup> to its 1980 interim definition of "solid waste," that would have regulated fewer recycled hazardous secondary materials as RCRA "solid waste" than was the case under the 1980 interim definition. The proposed 1983 amendments, however, still would have included some recycled secondary materials within the definition of "solid waste" under Subtitle C of RCRA, but only based upon both the nature of a material and the means by which a recycled material actually is managed and recycled.<sup>205</sup> In its Preamble prior to these proposed amendments, EPA stated "that, in light of the interlocking statutory provisions and RCRA's legislative history, it was clear that 'Congress indeed intended that materials being recycled or held for recycling can be wastes, and if hazardous, hazardous wastes.'"<sup>206</sup> EPA also stated in support of these proposed amendments that "not only can materials destined for recycling or being recycled be solid and hazardous wastes, but the Agency clearly has the authority to regulate recycling activities as hazardous [waste] management."<sup>207</sup>

While asserting its interest in recycling activities and materials being held for recycling, EPA's discussion left unclear whether the agency believed its

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<sup>200</sup> *Id.* Furthermore, "under this standard generators [might] have to find out how all other generators are managing the same material—an often difficult or even impossible undertaking." *Id.*

<sup>201</sup> *Id.* Under the 1980 interim regulations "persons engaged in recycling operations were subject to regulation [under RCRA] as hazardous waste generators, transporters, or storage facilities only if they were handling a hazardous sludge or a material listed as an RCRA hazardous waste." *Id.* However, listed hazardous wastes and hazardous sludge were regulated under the 1980 interim regulations only up to, but not including, the point of recycling, so that their transportation and storage prior to recycling were regulated under RCRA and persons who generated them were regulated as generators under RCRA. *Id.* The 1980 interim regulations, however, excluded from regulation under RCRA beneficially recycled materials (other than sludge) if those materials were RCRA hazardous wastes only because they exhibited a characteristic of a hazardous waste. *Id.* Under the 1980 interim regulations, a person engaged in recycling would be subject to regulation as a generator under subtitle C of RCRA if its recycling operations generated an RCRA hazardous waste. *Id.* at n.3.

<sup>202</sup> 1985 Preamble, *supra* note 1, at 617.

<sup>203</sup> *AMC I*, 824 F.2d at 1179.

<sup>204</sup> 48 Fed. Reg. 14,507-12 (April 4, 1983).

<sup>205</sup> 1983 Preamble, *supra* note 26, at 14,475. The 1983 proposal also proposed revised management standards for recycled hazardous wastes that would seek to "regulate only those recycling activities, or those particular aspects of recycling activities, that pose[d] a significant potential for environmental harm." *Id.*

<sup>206</sup> *AMC I*, 824 F.2d at 1179 (quoting 48 Fed. Reg. at 14,473).

<sup>207</sup> 1983 Preamble, *supra* note 26, at 14,473.

jurisdiction extended to materials recycled in an industry's on-going production processes or only to materials disposed of and recycled as part of a waste management program. In its preamble, EPA stated that "the revised definition of solid waste sets out the Agency's view of its jurisdiction over the recycling of hazardous waste . . . Proposed section 261.6 then contains exemptions from regulations for those hazardous waste recycling activities that we do not think require regulation." The [proposed] amended regulatory description of "solid waste," then, did not include materials "used or reused as effective substitutes for raw materials in processes using raw materials as principal feedstocks." EPA explained the [proposed] exclusion as follows:

[These] materials are being used essentially as raw materials and so ordinarily are not appropriate candidates for regulatory control. Moreover, when these materials are used to manufacture new products, the processes generally are normal manufacturing operations . . . . The Agency is reluctant to read [RCRA] as regulating actual manufacturing processes.

. . . This, then, seemed clear: EPA was drawing a line between discarding and ultimate recycling, on the one hand, and a continuous or ongoing manufacturing process with one-site "recycling," on the other. If the activity fell within the latter category, then the materials were not deemed to be "discarded."<sup>208</sup>

This 1983 proposed amendment to EPA's definition of "solid waste" under RCRA therefore "proposed exclusion of all materials used or reused as effective substitutes for raw materials . . . ."<sup>209</sup>

EPA thereafter in early 1985 adopted a regulation<sup>210</sup> that generally defined a "solid waste" (for purposes of Subtitle C of RCRA's "cradle to grave" regulatory programs for "hazardous waste"<sup>211</sup>) to include most recycled secondary materials, with only "a very narrow exclusion of essentially only materials processed within the meaning of the 'closed loop' exception,"<sup>212</sup> under which a secondary material must be returned as a raw material substitute to the original manufacturing process, without first being "reclaimed" (processed to recover a usable product or

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<sup>208</sup> *AMC I*, 824 F.2d at 1179-80 (citations to Federal Register omitted).

<sup>209</sup> *Id.* at 1182.

<sup>210</sup> 50 Fed. Reg. 664 (Jan. 4, 1985) (codified at 40 C.F.R. § 261.2 (1985)).

<sup>211</sup> 40 C.F.R. § 261.1(b)(1), adopted in 1985 as part of EPA's adoption of a revised definition of "solid waste" under RCRA, states that "[t]he definition of solid waste contained in this part [261] applies only to wastes that also are hazardous for purposes of the regulations implementing Subtitle C of RCRA. For example, it does not apply to materials (such as non-hazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled."

<sup>212</sup> *AMC I*, 824 F.2d at 1182.

regenerated).<sup>213</sup> EPA in 1985 also adopted revised management standards for recycling hazardous wastes.<sup>214</sup>

EPA in its Preamble accompanying the final 1985 definition stated that it based this 1985 definition of "solid waste" upon its beliefs that "[RCRA] embodies a general principle that most hazardous secondary materials are considered to be hazardous wastes when recycled" and that "RCRA expresses a presumption that accumulated hazardous secondary materials are solid and hazardous wastes."<sup>215</sup> EPA, however, conceded that its authority over recycling activities "is not unlimited," stating that it did "not believe [its] authority extends to certain types of recycling activities that are shown to be very similar to normal production operations or to normal uses of commercial products."<sup>216</sup> Furthermore, EPA stated that it did "not accept the argument that a potentially harmful recycling practice is invariably subject to regulation under Subtitle C, because potential environmental harm is not always a determinative indicator of how closely a recycling activity resembles waste management."<sup>217</sup>

EPA's 1985 approach to which recycled secondary materials are classified as "solid waste" under Subtitle C of RCRA "adopt[ed] the approach that for secondary materials being recycled, one must know both what the material is and how it is being recycled before determining whether it is Subtitle C waste"<sup>218</sup> and was based upon EPA's position that "some recycling practices bear more resemblance to waste management, . . . [so] the hazardous secondary materials therefore remain regulated as wastes."<sup>219</sup> A consequence of EPA's 1985 definition of "solid waste," which considered both the nature of the material being recycled and the recycling activity being used, was

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<sup>213</sup> *Id.* at 1180.

<sup>214</sup> 1985 Preamble, *supra* note 1, at 643. Under these 1985 management standards for hazardous wastes to be recycled (also referred to as "recyclable materials"), generators and transporters of recyclable materials ordinarily are subject to regulation under EPA's general regulations for hazardous waste generators and transporters in 40 C.F.R. Parts 262 & 263, and facilities that store recyclable materials before recycling are subject to EPA's general regulations for hazardous waste storage facilities in 40 C.F.R. Parts 264 & 265. *Id.* Under the 1985 management standards for recyclable materials, "[EPA] usually [does] not regulate the recycling process itself, except when the recycling is analogous to land disposal or incineration [or burning for energy recovery]." *Id.* Under the 1985 management standards for recyclable materials, certain types of recyclable materials and certain types of recycling activities are subject to special regulatory standards, which are in 40 C.F.R. Part 266 and cross-referenced in 40 C.F.R. § 261.6(a)(2). *Id.* These special standards are discussed *supra* note 46. However, 40 C.F.R. § 261.6 exempts certain types of recyclable materials from some or all of the regulations which EPA has promulgated under subtitle C of RCRA. 40 C.F.R. § 261.6.

<sup>215</sup> 1985 Preamble, *supra* note 1, at 616 (footnote omitted). EPA also stated that it "reads [RCRA] to state that hazardous secondary materials being recycled are wastes and that we ordinarily have jurisdiction to regulate most recycling activities involving those materials." *Id.* at 617.

<sup>216</sup> *Id.* at 616-17.

<sup>217</sup> *Id.*

<sup>218</sup> *Id.* at 618.

<sup>219</sup> 2003 Preamble, *supra* note 3, at 61,561.

that the same material [could] be a waste if it [was] recycled in certain ways, but would not be a waste if it [was] recycled in other ways. For example, an unlisted by-product that is reclaimed is not defined as a solid waste. However, the same by-product is defined as a waste if it is recycled by being (a) placed on the land for beneficial use, (b) incorporated into a product that is placed on the land for beneficial use, (c) burned as a fuel, (d) incorporated into a fuel, or (e) accumulated speculatively. Obviously, the by-product also is a waste whenever it is disposed of or incinerated rather than recycled.<sup>220</sup>

Before adopting this final regulation in 1985, EPA considered, but rejected, the alternative of classifying all recycled secondary materials as “solid wastes” under RCRA and another alternative of classifying all recycled secondary materials as not being “solid waste” under RCRA.<sup>221</sup> EPA also rejected an alternative approach, under which “a recycled material would count as a solid waste when a person other than the generator is paid to recycle it,” and a narrative definition of “solid waste” based on the nature of a secondary material itself, such as whether the secondary material is typically dealt with as a commodity, and whether it contains significant concentrations of non-recyclable toxic constituents not customarily found in analogous raw materials.<sup>222</sup>

EPA’s 1985

‘definitions of solid waste’ regulations . . . in effect separate[d] recyclable hazardous secondary materials into two broad categories—those that are classified as solid wastes when recycled, and therefore subject to regulation under Subtitle C of RCRA, if they are listed or characteristic hazardous wastes, and those that are not considered solid wastes when recycled, and thus are not regulated.<sup>223</sup>

Provisions of EPA’s 1985 final rule (that are still in effect) define “solid waste” for purposes of Subtitle C to mean “any discarded material that is not excluded by § 261.4(a) or that is not excluded by variance granted under §§ 260.30 and 260.31”;<sup>224</sup> and provide as amended in 1997,<sup>225</sup> that “discarded material” is

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<sup>220</sup> 1985 Preamble, *supra* note 1, at 619.

<sup>221</sup> *Id.* at 617.

<sup>222</sup> *Id.* EPA rejected such a narrative definition both because it believed such a definition would be too subjective and because EPA believed that “in most cases” (except for certain specified “inherently waste-like materials”) “one must know both what the material is and how it is being recycled before determining whether it is a waste.” *Id.* EPA therefore rejected such a narrative definition of “solid waste” which would be based only upon the nature of the material itself. *Id.*

<sup>223</sup> 2007 Preamble, *supra* note 3, at 14,175.

<sup>224</sup> 40 C.F.R. § 261.2(a)(1) (2008). Section 261.4(a) exempts more than twenty specific substances and materials from RCRA’s definition of “solid waste”; these excluded substances and materials include those materials and substances specifically excluded by section 1004(27) of RCRA, 42 U.S.C. § 6903(27) (which provides RCRA’s statutory definition of “solid waste.” *See supra* notes 63-65 and accompanying text).

any material or substance that is within any one or more of the following four categories (as defined by EPA regulations): “abandoned,” “recycled” (defined by EPA as “used, reused, or reclaimed”<sup>226</sup>), “inherently waste-like,” or a “military munition.”<sup>227</sup> EPA regulations define in detail what substances and materials are considered to be RCRA “discarded material” under each of the four categories.

<sup>225</sup> 62 Fed. Reg. 6622, 6651 (Feb. 12, 1997).

<sup>226</sup> 40 C.F.R. § 261.1(c)(7) (2008). An EPA regulation states, that for purposes of the definition of “solid waste” under Subtitle C of RCRA, a material is “used or reused”

if it is either:

(i) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

*Id.* § 261.1(c)(5).

EPA defines a “reclaimed material” as one that “is processed to recover a usable product, or . . . is regenerated.” *Id.* § 261.1(c)(4). “Wastes are regenerated when they are processed to remove contaminants in a way that restores the wastes to their usable original condition.” Incidental Processing Activities Guidance, *supra* note 3, at 4. Examples of reclamation “are recovery of lead values from spent batteries and regeneration of spent solvents.” 40 C.F.R. § 261.1(c)(4). “Reclamation involves processing of secondary materials in some way so that the materials can be used or reused. . . . An example of reclamation is processing of a spent solvent to restore its solvent properties before it is suitable for reuse as a solvent.” 2003 Preamble, *supra* note 3, at 61,561. “In a reclamation operation, some components of a material are recovered and reused, while others are separated and in some cases discarded. . . . EPA has found that some reclamation processes involve discard (because they more closely resemble waste management), while other such processes do not (because they more closely resemble normal manufacturing).” *Id.* at 61,562.

From a technical standpoint, some reclamation processes are relatively simple, such as magnetic separation of ferrous metals from a pollution control sludge. Other types of reclamation may be much more complex, and may involve a series of processing steps to obtain the desired end-product. An example could be where a solid-form secondary material is separated into different fractions and then smelted to recover metal constituents.

In some cases, reclamation essentially involves extraction of a valuable component from a waste or other material. An example of this type of reclamation occurs in the mineral processing industry, such as when smelter by-products are processed in a series of steps to extract several different precious metals. Another type of reclamation involves “regenerating” used products or materials so that they can be reused for their original purpose, or some other purpose. A common example of this type of reclamation is found in the steel making industry, where “pickling” acids are used to remove scale and other impurities from steel, eventually lose their acidic properties, and must be reclaimed before they can be used again as pickling agents. In this case, the reclamation process may yield regenerated pickling acid, as well as a marketable iron oxide product.

*Id.* at 61,564-65.

<sup>227</sup> 40 C.F.R. § 261.2(a)(2) (2008). In 1997 the EPA added the category of “military munitions identified as a solid waste in 40 C.F.R. 266.202” as an additional alternative category of “discarded

EPA's definitions in its 1985 rule of "abandoned" materials, "inherently waste-like" materials, and a discarded "military munition" are fairly succinct compared to EPA's complex 1985 definition of "recycled" material, which were considered "discarded material" and therefore RCRA "solid waste." Under EPA's 1985 rule, materials are considered to be abandoned and therefore solid waste "by being: (1) [d]isposed of; (2) [b]urned or incinerated; or (3) [a]ccumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated."<sup>228</sup> EPA's 1985 definition lists a number of specific materials as "inherently waste-like materials" "when they are recycled in any manner,"<sup>229</sup> on the grounds that

(i)(A) [t]he materials are ordinarily disposed of, burned, or incinerated; or (B) [t]he materials contain toxic constituents listed in Appendix VIII of part 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and (ii) [t]he material may pose a substantial hazard to human health and the environment when recycled.<sup>230</sup>

EPA's 1985 rule also specifies that "military munition" are considered discarded material if they are "identified as [ . . . ] solid waste in 40 C.F.R. 266.202."<sup>231</sup>

EPA's 1985 regulation, which is still in effect, indicates that certain categories of "secondary materials" that are recycled in specified manners are considered to be "discarded material" and RCRA solid waste.<sup>232</sup> Under EPA's 1985 regulations "EPA determines whether a material is a RCRA solid waste when it is recycled by examining both the material or substance itself and the recycling activity involved."<sup>233</sup> The 1985 regulation "identifies five categories of [hazardous recycled] 'secondary materials'"<sup>234</sup> that are considered RCRA solid wastes if they are recycled (or accumulated, stored, or treated before recycling) by one or more of four specified processes. (The five categories are spent materials,<sup>235</sup> certain sludge,

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material." 62 Fed. Reg. 6622, 6651 (Feb. 12, 1997). *Military Toxic Project v. EPA*, 146 F.3d 948 (D.C. Cir. 1998), upheld EPA's military munitions rule at 40 C.F.R. Part 266, 62 Fed. Reg. 6622 (February 12, 1997), which regulates certain military munitions as hazardous solid wastes under Subtitle C of RCRA.

<sup>228</sup> 40 C.F.R. § 261.2(b).

<sup>229</sup> *Id.* § 261.2(d).

<sup>230</sup> *Id.* § 261.2(d)(3). An inherently waste-like material therefore is designated as "solid waste" under Subtitle C of RCRA when it meets these criteria set forth in 40 C.F.R. § 261.1(d)(3) "no matter how it is being recycled." 1985 Preamble, *supra* note 3, 50 Fed. Reg. at 619.

<sup>231</sup> 40 C.F.R. § 261.2(a)(2)(iv).

<sup>232</sup> *AMC I*, 824 F.2d at 1180.

<sup>233</sup> *Id.*

<sup>234</sup> *Id.*

<sup>235</sup> A "spent material" is defined by EPA to mean "any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing." 40 C.F.R. § 261.1(c)(1). EPA interprets "purpose" in this definition to mean a material's



certain by-products,<sup>236</sup> certain commercial chemical products and certain non-excluded scrap metals.<sup>237</sup>) First, these five categories of hazardous secondary materials are considered RCRA solid waste when used in a manner constituting disposal, that is being “(A) [a]ppplied to or placed on the land in a manner that constitutes disposal; or (B) [u]sed to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste.”<sup>238</sup>) Second, these five categories are also considered RCRA solid waste when they are “[b]urned to recover energy . . . , [u]sed to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste).”<sup>239</sup> Third, hazardous materials—including spent materials, certain listed sludges and by-products, and non-excluded scrap metal—are considered RCRA hazardous wastes when reclaimed (but mineral processing secondary materials are exceptions, as provided in 40 C.F.R. § 261.4(a)(17)).<sup>240</sup> Finally, all of these specified categories of hazardous secondary

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initial or original use; under this definition a material that is initially used as a cleanser (to clean precision metal investment casings for aerospace and industrial gas turbines) is a “spent material” after this initial use when quantities of the used material are shipped to a fertilizer manufacturer to be used as an ingredient of a fertilizer to be applied to land (without any further processing, treatment or reclamation). *Howmet Corp. v. EPA*, 2009 U.S. Dist. LEXIS 87175 (D.D.C. 2009).

<sup>236</sup> A “by-product” is defined by EPA to mean “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. Examples are process residues such as slags or distillation column bottoms. 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.” 40 C.F.R. § 261.1(c)(3).

<sup>237</sup> “Scrap metal” is defined by EPA to mean “bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.” *Id.* § 261.1(c)(6).

<sup>238</sup> *Id.* § 261.2(c)(1)(i). “However, commercial chemical products listed in § 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.” *Id.* § 261.2(c)(1)(ii).

<sup>239</sup> *Id.* § 261.2(c)(2)(I). “However, commercial chemical products listed in § 261.33 are not solid wastes if they are themselves fuels.” *Id.* § 261.2(c)(2)(ii).

<sup>240</sup> *Id.* § 261.2(c)(3). However, sludge and by-products exhibiting a characteristic of hazardous waste and commercial chemical products listed in 40 C.F.R. § 261.33 are not considered RCRA solid waste when reclaimed. *Id.*

Under its [1985] Subtitle C regulations, EPA classifies as solid wastes some-but not all-secondary materials that are recycled by reclamation. The regulations define ‘spent materials’ as being ‘discarded’ if they are destined for reclamation. However, ‘commercial chemical products’ are not defined as ‘discarded’ when reclaimed. Byproducts and sludges are defined as ‘discarded’ on a case-by-case basis. EPA regulates these materials when they are reclaimed, when it has listed them in the context of a hazardous waste listing determination. However, EPA does not regulate by-products and sludges being reclaimed that are not listed hazardous wastes. [S]ee Table 1 to 40 CFR 261.2. Finally, EPA has promulgated exceptions from the subtitle C definition for materials destined for reclamation. See 40 C.F.R. § 260.31(b)-(c); 40 C.F.R. § 261.4(a)(8).

materials, not including commercial chemical products listed in 40 C.F.R. § 261.33, are considered solid wastes when accumulated speculatively.

A material is “accumulated speculatively” if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that--during the calendar year (commencing on January 1)--the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 per cent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under § 261.4(c) are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.<sup>241</sup>

EPA’s 1985 regulations provide, however, in provisions that still apply, that certain materials are not RCRA solid waste when they are recycled.<sup>242</sup> Materials are not considered RCRA solid waste under EPA’s 1985 regulations “when they can be shown to be recycled by being: (i) [u]sed or reused as ingredients in an industrial process to make a product, provided the materials [were] not being reclaimed; or (ii) [u]sed or reused as effective substitutes for commercial product . . . .”<sup>243</sup> Furthermore, under a provision of the 1985 regulations, also still in effect and referred to as the “closed-loop exception,”<sup>244</sup> materials are not considered RCRA solid waste when they can be shown to be recycled by being

[r]eturned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there

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<sup>241</sup> 40 C.F.R. § 261.1(c)(8). EPA considers “speculative accumulation” to include over-accumulation. 1985 Preamble, *supra* note 1, at 634.

<sup>242</sup> 40 C.F.R. § 261.2(e).

<sup>243</sup> *Id.* § 261.2(e)(1)(i)-(ii). Examples of such secondary materials that are directly used as an ingredient or feedstock are “fly ash as a constituent in cement, or . . . distillation bottoms from manufacture of carbon tetrachloride as feedstock in producing tetrachlorethylene.” 50 Fed. Reg. at 619. Examples of reused secondary materials that are effective substitutes for commercial products are “certain sludges that are used as water conditioners and byproducts hydrochloric acid from chemical manufactur[ing] used in steel pickling.” *Id.* at 619-20.

<sup>244</sup> *AMC I*, 824 F.2d at 1180.

is no placement on the land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion at § 261.4(a)(17) apply rather than this paragraph.<sup>245</sup>

EPA excludes these types of recycling activities from RCRA's definition of solid wastes "because they are like ordinary usage of commercial products."<sup>246</sup> "In essence, EPA considers these types of recycling to be more akin to normal industrial production than waste management."<sup>247</sup> These use-and-reuse exclusions

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<sup>245</sup> 40 C.F.R. § 261.2(e)(1)(iii). Under the closed loop exception, the original manufacturing "process must use raw materials as principal feedstocks." *Am. Mining Cong.*, 824 F.2d at 1180 n.2. EPA's 1985 final rule excluded from the definition of "solid waste" "petroleum refining wastes, or oil recovered from such wastes, that were recycled by reinserting them into the refining process along with the normal crude feedstock." *Id.* at 1180 n.3 (citing 50 Fed. Reg. 49164 (Nov. 29, 1985)).

<sup>246</sup> *AMC I*, 824 F.2d 1180 (quoting 50 Fed. Reg. at 619).

<sup>247</sup> 2003 Preamble, *supra* note 3, at 61,561.

Furthermore, 40 C.F.R. § 261.4(a) provides that a number of specified materials are not "solid waste" for purposes of Subtitle C of RCRA, while 40 C.F.R. § 261.4(b) provides that certain specified categories of solid waste are not hazardous waste. EPA regulations at 40 C.F.R. §§ 260.30-.31, .33, also provide for issuance by EPA of a variance that can result in the following categories of recyclable material being classified as not solid waste under Subtitle C of RCRA: (1) materials that are accumulated speculatively without sufficient amounts being recycled in accordance with 40 C.F.R. § 261.1(c)(8); (2) materials that are reclaimed and then reused as feedstock within the original production process in which they were generated; and (3) commodity-like materials that have been reclaimed but must be reclaimed further before the materials are completely recovered.

The [1985] regulations . . . provide certain specific exemptions and exclusions from the definition of solid waste for particular recycling practices. For example, pulping liquors from paper manufacturing that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process are excluded from regulations under 40 C.F.R. § 261.4(a)(6). In some cases, these exclusions specify certain conditions that have to be met in order to qualify for and maintain the excluded status of the recycled material. An example of such a 'conditional exclusion' is the one provided in 40 C.F.R. 261.4(a)(9) for spent wood preserving solutions that are reclaimed and reused.

68 Fed. Reg. at 61,561. These specific exemptions, waivers and exclusions (which are still in effect today) are identified and discussed *id.* at 61,578-80.

Some of these exemptions, waivers and exclusions to the definition of "solid waste" under Subtitle C of RCRA which EPA promulgated in 1985 are "for materials generated in one industry and reclaimed in another." *Id.* at 61,565. Some of these inter-industry exclusion provisions are identified and discussed *id.* at 61,578-79. One of these inter-industry exclusion provisions is 40 C.F.R. § 261.4(a)(18), 63 Fed. Reg. 42185 (Aug. 6, 1998), which provides that certain residual oils produced by petrochemical manufacturers are not "solid waste" under RCRA Subtitle C. Petrochemical manufacturers (which use oil to produce petrochemical products such as organic chemicals) recycle these residual oils into petroleum refinery processes. Under 40 C.F.R. § 261.4(a)(18)(i) such residual oils are not considered "solid waste" under Subtitle C of RCRA, provided that certain conditions are satisfied (which are designed to classify residual oils as RCRA "solid waste" when they contain non-refinable hazardous materials that improperly adulterate the residual oils, in order to prevent "sham recycling" and speculative accumulation of residual oils). *Am. Petroleum Inst.*, rejected a challenge to this regulation by the petrochemical industry, which argued that all such recycled residual oils are not RCRA "solid waste" and that EPA had no authority to impose any conditions upon the availability this exclusion under this regulation. 216 F.3d at 58.

from the definition of solid waste for recycled secondary materials require that the recycling be “legitimate”<sup>248</sup> and permit incidental processing of secondary materials if the processing does not constitute reclamation.<sup>249</sup>

However, EPA’s 1985 definition of “solid waste” under RCRA also includes certain recycled secondary materials that are reused within an industry’s ongoing production process.<sup>250</sup> The “solid waste” definition includes the following materials processed by petroleum refineries:<sup>251</sup> (1) various hydrocarbon streams or “fractions” derived from distilling and further processing of crude oil at a petroleum refinery, which are returned to another appropriate processing stage in the refining process so they can be combined or blended to produce products such as gasoline, fuel oil and lubricating oils; and (2) “the hydrocarbons and materials which escape from a [petroleum] refinery’s production vessels [and which are] gathered and, by a complex retrieval system, returned to appropriate parts of the refining process.”<sup>252</sup> For mining, the “solid waste” definition includes the following materials processed by mining facilities involved in primary metals production:<sup>253</sup> (1) natural mineralogical ore materials that are reprocessed after earlier extraction processes as part of a mining facility’s primary metals production processes for extracting additional metal and (2) “valuable metal-bearing and

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<sup>248</sup> Incidental Processing Activities Guidance, *supra* note 3, at 4 n.2. This guidance does not specify the criteria to be used in making determinations of whether recycling is “legitimate,” instead referring to another EPA memorandum and to EPA’s proposed 2003 legitimate recycling regulations at 68 Fed. Reg. 61,596 (Oct. 28, 2003).

<sup>249</sup> Incidental Processing Activities Guidance, *supra* note 3, at 4. This Guidance interprets EPA’s 1985 definition of “solid waste” as providing that secondary materials that undergo only “incidental processing” and are not reclaimed are excluded under the use/reuse recycling provision of 40 C.F.R. § 261.2(e)(1). *Id.* at 2. This Guidance permits incidental processing of recycled secondary materials, which can involve more than one step, when it only changes a material’s physical form (without changing the mass of the material or its chemical composition), as well as processing that makes only either a minor change to the mass of the material (which also makes a minor change to the material’s chemical composition) or a minor change to the physical form of the material. *Id.* at 4. Examples of such incidental processing include processes that increase or reduce the size of particles, melting of base metals, viscosity adjustments, screening or filtering to protect pumps or other equipment, separating minor amounts of foreign materials to ensure purity, and final processing of a material resembling a finished product to remove minor impurities. *Id.* at 5. The decision as to whether authorized “incidental processing” is occurring takes into account whether raw materials used in analogous processes are subject to the same or similar processes. *Id.*

<sup>250</sup> *AMC I*, 824 F.2d at 1178, 1180 n.3.

<sup>251</sup> “Petroleum refineries vary greatly both in respect of their products and their processes. Most of their products, however, are complex mixtures of hydrocarbons produced through a number of interdependent and sometimes repetitious processing steps. In general, the refining process starts by ‘distilling’ crude oil into various hydrocarbon streams or ‘fractions.’ The ‘fractions’ are then subjected to a number of processing steps. Various hydrocarbon materials derived from virtually all stages of processing are combined or blended in order to produce products such as gasoline, fuel oil, and lubricating oils.” *Id.* at 1181.

<sup>252</sup> *Id.*

<sup>253</sup> “In the mining industry, primary metals production involves the extraction of fractions of a percent of a metal from a complex mineralogical matrix (i.e., the natural material in which minerals are embedded). Extractive metallurgy proceeds incrementally . . . [, because] all metal cannot be extracted in one fell swoop. In consequence, materials are reprocessed in order to remove as much of the pure metal as possible from the natural ore.” *Id.*

mineral-bearing dusts [that] are often released in processing a particular metal” and that are recaptured, recycled and reused by a mining facility, also as part of its processes for extracting a particular metal (“frequently in production processes different from the one from which the dusts were originally emitted”).<sup>254</sup>

In addition, EPA’s 1985 regulations provide that each of the following types of recycled materials are RCRA solid waste, even if the recycling involves the use, reuse, or return to the original process as described above: (1) materials used in a manner constituting disposal, or used to produce products that are applied to land; (2) materials burned for energy recovery, used to produce a fuel, or contained in fuels; (3) materials accumulated speculatively; and (4) those materials presently listed by EPA as inherently waste-like materials.<sup>255</sup> Furthermore, “EPA . . . continues to regard any material intended for recycling that escapes into the environment as ‘discarded’ and therefore, within its statutory jurisdiction [under RCRA].”<sup>256</sup>

However, “materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under [the derived-from rule] unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal,” under a provision of 40 C.F.R. § 261.3(c)(2), which was adopted in 1985.<sup>257</sup> Under the provision, commercial products reclaimed from hazardous wastes, such as regenerated solvents and reclaimed metals that are either suitable for direct use or only have to be refined to be usable, are products, not wastes, and are not subject to regulation under Subtitle C of RCRA.<sup>258</sup> But this principle does not apply to materials that have only been partially reclaimed and that must be further reclaimed to be used as a product, although EPA regulations<sup>259</sup> authorize issuance of a discretionary variance for such materials, which would exclude them from regulation as a “solid waste” under subtitle C of RCRA.<sup>260</sup>

In *United States v. ILCO, Inc.*,<sup>261</sup> EPA’s inclusion of “recycled material” within its 1985 regulatory definition of “solid waste” was held to be a reasonable exercise of EPA’s statutory authority under RCRA, as applied to spent secondary consumer products—such as automobile and truck batteries containing lead—obtained from commercial suppliers by a reclamation facility that did not generate the secondary materials but that reclaimed lead from the recycled batteries. The court held that “EPA has authority under RCRA to define materials destined for recycling as a subset of ‘solid waste.’”<sup>262</sup> The court stated in *ILCO* that EPA’s 1985 regulatory definition of “solid waste” reflected the agency’s “policy decision that spent batteries, including their lead components, became part of the waste

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<sup>254</sup> *Id.*

<sup>255</sup> 40 C.F.R. § 261.2(e)(2).

<sup>256</sup> 2003 Preamble, *supra* note 3, at 61,563.

<sup>257</sup> 40 C.F.R. § 261.3(c)(2).

<sup>258</sup> 1985 Preamble, *supra* note 1, at 634.

<sup>259</sup> 40 C.F.R. §§ 260.30(c), 260.31(c).

<sup>260</sup> 1985 Preamble, *supra* note 1, at 655.

<sup>261</sup> 996 F.2d 1126, 1130 (11th Cir. 1993).

<sup>262</sup> *Id.* at 1131 n.8.

disposal problem when the original consumer discarded the battery”<sup>263</sup> and, moreover, that “their secondary character as recyclable material is irrelevant” to the determination that these batteries and their contents are RCRA “discarded material.”<sup>264</sup>

However, *AMC I*<sup>265</sup> held that EPA exceeded its statutory authority granted under RCRA by including recycled in-process “spent” or secondary materials reused within an industry’s ongoing manufacturing or production processes within its 1985 definition of “solid waste,” because such materials are not “discarded material” within RCRA’s definition of “solid waste.”<sup>266</sup> Judge Mikva, of the D.C. Circuit Court of Appeals, dissented, arguing that “EPA has adequately demonstrated that its interpretation is a reasonable construction of an ambiguous term in a statute committed to the agency’s administration . . . [to which the court is] obliged to defer . . . under the principles of *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837 (1984) . . . .”<sup>267</sup> Judge Mikva asserted that 42 U.S.C. § 6924(r)(2), which provides an exemption from RCRA’s labeling requirement for materials “generated and reinserted onsite into the refining process,” indicated that Congress intended “at least some” recycled in-process secondary materials to be included within RCRA’s definition of “discarded material” and “solid waste.”<sup>268</sup> The “clear legislative history” of the 1984 RCRA amendments, Judge Mikva asserted, also supported EPA’s position that “solid waste” under RCRA includes “at least some materials that are generated in a primary process and then recycled into another on-site process.”<sup>269</sup> The dissent would have found that EPA reasonably included certain recycled secondary materials within its definition of RCRA “solid waste” because such recycled in-process secondary materials can be spilled or leaked prior to being recycled and reused in manufacturing or industrial operations and can come “into contact with land or water in such a way as to pose the risks to health and environment that animated Congress to pass RCRA.”<sup>270</sup>

EPA requires a person to provide relevant factual evidence in support of a claim that particular materials are not solid waste subject to regulation under RCRA, under a 1985 rule, which is still in effect:

Respondents in actions to enforce regulations implementing Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a

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<sup>263</sup> *Id.* at 1131-32.

<sup>264</sup> *Id.* at 1132.

<sup>265</sup> 824 F.2d 1177 (D.C. Cir. 1987).

<sup>266</sup> *Id.* at 1185-86, 1193. However, the court in *AMC I* did not hold that any specific secondary materials recycled by petroleum refineries or by mining facilities cannot be classified by EPA as “solid wastes” under RCRA. See *supra* notes 93-113 and accompanying text. The interpretation of the term “discarded material” in RCRA’s definition of “solid waste” in the *AMC I* decision is discussed *supra* notes 93-119 and accompanying text.

<sup>267</sup> *Id.* at 1194 (Mikva, J., dissenting).

<sup>268</sup> *Id.*

<sup>269</sup> *Id.* at 1194, 1195.

<sup>270</sup> *Id.* at 1196.

known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.<sup>271</sup>

#### V. EPA'S 2003 PROPOSED AMENDMENTS TO ITS RCRA SUBTITLE C DEFINITION OF "SOLID WASTE"

On October 28, 2003, EPA proposed amendments<sup>272</sup> to its definition of "solid waste" under Subtitle C of RCRA that would have excluded additional hazardous secondary materials, which are reclaimed in a continuous process within the same industry, which generated the materials, from the definition of "solid waste" that is subject to regulation under Subtitle C of RCRA. The 2003 proposed amendments would have been "de-regulatory in nature," making "certain recyclable materials that . . . heretofore [had] been subject to [RCRA Subtitle C] hazardous waste regulations . . . no longer . . . regulated under the [RCRA] hazardous waste regulatory system."<sup>273</sup> The proposed amendments, which EPA stated were based upon the holding in *AMC I*<sup>274</sup> "that materials destined for beneficial reuse of recycling in a continuous process by the generating industry are not discarded,"<sup>275</sup> proposed that certain hazardous secondary materials—including spent materials, listed sludge and listed by-products that were recycled by being reclaimed, which at the time of the proposed amendments were considered solid waste under subtitle C of RCRA—would no longer be considered "discarded materials" and hazardous solid waste subject to regulation under Subtitle C of RCRA, where the materials were generated, reclaimed and reused in a continuous "legitimate recycling" process<sup>276</sup> within the generating industry, in accordance with certain specified criteria.<sup>277</sup>

The proposals included new criteria for "legitimate recycling," which would have resulted in regulation under RCRA of secondary materials that are subject to "sham" recycling, which the agency asserted would be "some form of treatment or

<sup>271</sup> 40 C.F.R. § 261.2(f).

<sup>272</sup> 2003 Preamble, *supra* note 3, at 61,558-599.

<sup>273</sup> *Id.* at 61,560.

<sup>274</sup> *AMC I*, 824 F.2d 1177 (D.C. Cir. 1987). *AMC I* is discussed *supra* notes 93-119 and accompanying text.

<sup>275</sup> 2007 Preamble, *supra* note 3, at 14,175.

<sup>276</sup> EPA has asserted that "the concept of 'legitimate recycling' . . . has been and is a key component of RCRA's regulatory program for recycling, but . . . to date has been implemented without regulatory criteria." *Id.* at 14,174.

<sup>277</sup> 2003 Preamble, *supra* note 3, at 61,560, 61,563, 61,564.

disposal being called recycling in an attempt to avoid [RCRA] regulation.”<sup>278</sup> The 2003 proposals specified the four criteria to be considered by regulators to determine whether reclamation of hazardous secondary materials was “legitimate” recycling of the secondary materials:

1. Criterion #1: The secondary material to be recycled is managed as a valuable commodity. Where there is an analogous raw material, the secondary material should be managed in a manner consistent with the management of the raw material. Where there is no analogous raw material, the secondary material should be managed to minimize the potential for releases into the environment.

2. Criterion #2: the secondary material provides a useful contribution to the recycling process or to a product of the recycling process and evaluating this criterion should include consideration of the economics of the recycling transaction. The recycling process itself may involve reclamation, or direct reuse without reclamation.

3. Criterion #3: The recycling process yields a valuable product, or intermediate that is: (i) Sold to a third party; or (ii) Used by the recycler or the generator as an effective substitute for a commercial product or as a useful ingredient in an industrial process.

4. Criterion #4: the product of the recycling process:

(i) Does not contain significant amounts of hazardous constituents that are not found in analogous products; and

(ii) Does not contain significantly elevated levels of any hazardous constituents that are found in analogous products; and

(iii) Does not exhibit a hazardous characteristic that analogous products do not exhibit.<sup>279</sup>

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<sup>278</sup> *Id.* at 61,581. A process that “creates a material that no one wants or will use . . . can be presumed . . . [to be a] process . . . conducted to dispose of the material; i.e., it is sham recycling.” *Id.* at 61,585. Alternatively, the addition of “secondary materials to manufacturing operations simply as a means of disposing of them . . . is sham recycling.” *Id.* at 61,584. A recycling process which recovers only a small fraction of a particular targeted secondary material also may be classified as sham recycling. *Id.* Another example of sham recycling may be “where a relatively worthless secondary material [is] mixed with a more valuable or useful material in an attempt to disguise and dispose of it . . .” *Id.* at 61,585. Storage of secondary materials on land, however, is not necessarily an indication of sham recycling, since in some industries, such as large-scale mineral processing operations, “storage of raw materials on the land is a normal part of the manufacturing process . . .” *Id.* at 61,584.

<sup>279</sup> 2003 Preamble, *supra* note 3, at 61,583. “This proposed [fourth] criterion addresses ‘toxics along for the ride’ in products made from recycled secondary materials. Put another way, the question posed by this criterion is whether hazardous constituents are ‘discarded’ by being incorporated into a product made from hazardous secondary materials, which would indicate sham recycling.” *Id.* at 61,586. “[T]oxics along for the ride’ is an important consideration when the toxic constituents affect either the performance of the product or cause adverse environmental or health effects.” 2007 Preamble, *supra* note 3, at 14,199. Under the 2003 proposed regulations, EPA would have applied these four criteria on a case-by-case basis to determine if a particular recycling or reclamation process was “legitimate”; all four of these criteria would not have to be satisfied and “there [could] be situations when a recycling activity that does not conform to one or more of the criteria could be considered legitimate.” 2003 Preamble, *supra* note 3, at 61,583.



EPA, in its Preamble accompanying the proposed 2003 criteria, noted that legitimate processes that recycle secondary materials (1) may remove contaminants from the materials or regenerate the materials' useful properties so that they can be used as ingredients or in processes to manufacture a product; (2) may recover materials that can be reused as a catalyst, carrier, or synthesis media in a production process; or (3) may recover valuable materials, such as conditioning agents used in a manufacturing process or constituents such as minerals.<sup>280</sup>

Under EPA's 2003 proposed amendments to its definition of "solid waste" under Subtitle C of RCRA,

hazardous secondary materials would have to be generated and reclaimed within a single industry in order to qualify for the exclusion . . . Thus, for example, if a hazardous secondary material was generated in the motor vehicle manufacturing industry and then shipped for reclamation to a facility in the ship and boat building industry, the exclusion would not apply, and the materials would be regulated as hazardous wastes.<sup>281</sup>

The proposed amendments called for use of 4-digit codes for industry of "the North American Industry Classification System (NAICS), which was developed by the Office of Management and Budget (OMB) as the foundation for industry definitions";<sup>282</sup> however the agency's proposed definitions of "industry" for the petroleum, primary mineral processing and waste management and remediation services industries differed from the NAICS approach to those specific industries.<sup>283</sup>

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<sup>280</sup> *Id.* at 61,585.

<sup>281</sup> *Id.* at 61,565.

<sup>282</sup> *Id.* at 61,567. *See id.* at 61,567-75, 61,597-99. "EPA chose the four-digit NAICS level (rather than the three or five-digit level) because that level appeared to be an appropriate compromise between being too broad or too restrictive . . . . In general, [EPA] found that classification at the three-digit level led to grouping facilities that did not have similar production processes. Classification at the five digit-level, on the other hand, led to grouping similar processes, but greatly reduced opportunities for recycling." 2007 Preamble, *supra* note 3, at 14,184. As another possible alternative approach, *id.*, EPA indicated in its commentary in the Preamble to its 2003 proposed amendments that it would consider adjusting its 4-digit NAICS approach for intra-industry recycling in cases of so-called batch or tolling operations under which "larger manufacturers will contract out production of certain chemicals to smaller manufacturers . . . . These smaller manufacturers produce chemicals in batches, where the product slates may change several times over the course of a year, for example. These smaller manufacturers . . . may generate hazardous secondary materials that could be returned to the larger chemical manufacturer for reclamation along with similar secondary materials (generated by the larger facility from producing the same chemical). To the extent that the [proposed 4-digit] NAICS approach . . . classifies both establishments . . . the same . . . , this reclamation would be excluded under [the 2003] proposal." 2003 Preamble, *supra* note 3, at 61,573.

<sup>283</sup> *Id.* at 61,570-72.

The 2003 proposed amendments would have permitted reclamation of excluded material to “take place in multiple processing steps, provided that each processing step takes place in the same industry that generated the material,” and would have “allow[ed] reclamation of excluded material to take place at one or more different locations or facilities, as long as each reclamation step occurs within the generating industry.”<sup>284</sup> The 2003 proposed amendments also would have allowed secondary materials being reclaimed to be temporarily stored as part of the reclamation process as long as the materials were not “accumulated speculatively,” as that phrase is defined in EPA’s existing regulation at 40 C.F.R. § 261.1(c)(8).<sup>285</sup> EPA asserted that its proposed approach was consistent with the *Association of Battery Recyclers* holding that temporary storage of secondary material is permitted during reclamation of recycled secondary materials that are not RCRA “solid wastes.”<sup>286</sup> In addition, EPA’s 2003 proposed amendments also “would not place any geographical limits on movements of excluded materials, provided that each facility where the material is reclaimed is in the same industry that originally generated the material.”<sup>287</sup> Therefore, under EPA’s 2003 proposed amendments, “hazardous secondary materials, generated at an establishment, [would be] excluded [from being classified as RCRA “solid wastes”] if reclaimed at the same or another establishment, whether on-site or off-site, where the establishment reclaiming the material[s] is classified under the same NAICS (at the 4-digit level) classification as the generating establishment (industry).”<sup>288</sup> However, hazardous secondary materials generated in one industry and reclaimed in a different industry would have continued to be classified as RCRA “solid waste,” even if the generating industry and the reclamation industry were located at the same site, under the proposed 2003 amendments.<sup>289</sup> EPA noted, in agency commentary accompanying the proposed amendments, that a centralized reclamation facility serving all establishments within a particular industry might be classified as a different industry from the establishments it serves.<sup>290</sup> Furthermore,

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<sup>284</sup> *Id.* at 61,565. EPA’s 2003 proposed amendments “would not allow a generator to ship excluded materials to a broker or other middleman before it is received at a reclamation facility.” *Id.* at 61,575.

<sup>285</sup> *Id.* at 61,575-76.

<sup>286</sup> *Id.* at 61,576.

<sup>287</sup> 2003 Preamble, *supra* note 3, at 61,566. “It is therefore possible that in some cases excluded materials could be generated in the United States and subsequently exported for reclamation to a facility in a foreign country that is in the same industry that generated the material . . . . However, such excluded materials may be subject to regulation as hazardous wastes in the receiving country . . . .” *Id.* at 61,589. An export of a hazardous material from the United States also may be subject to requirements of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, March 22, 1989, 28 I.L.M., 649, which may require the prior informed consent of the importing country to the import of the hazardous wastes. *Id.* at 61,589-90.

<sup>288</sup> *Id.* at 61,573.

<sup>289</sup> *Id.*

<sup>290</sup> *Id.* at 61,573-74. As an example, EPA referred to a “centralized solvent reclamation facility for paint manufacturers . . . , [whose] reclamation [activity] . . . ultimately become[s] so significant (e.g., due to the number of employees, or receipts from its activities, etc.) as to be a separate establishment. In that case, the reclamation activity would likely be classified in an industry other than paint manufacturing, and the used solvents would no longer be excluded because they are not

a hazardous secondary material that was not recycled in accordance with the criteria set forth in the 2003 proposed amendments would have been considered "a hazardous waste for [RCRA] Subtitle C purposes from the time the generator first generated it,"<sup>291</sup> and recycled residual secondary materials remaining after reclamation that have no further use and must be disposed of and would have been considered RCRA "solid waste."<sup>292</sup>

The basic premise of [the 2003] proposed exclusion is that materials that are "generated and reclaimed in a continuous process within the same industry" (as defined in this proposal) would not be considered wastes for Subtitle C purposes. Generally, when a material is reclaimed within the same industry that generated it, the material can remain useful to that industry, and thus is not discarded. In effect, the industry has not "finished" with the material; rather, it is to the advantage of the industry to continue using it as a substitute for other types of materials.<sup>293</sup>

The Preamble to EPA's 2003 proposed amendments mentioned two different options for defining "continuous process within the same industry," with the second option differing from the first only with respect to how to deal with "reclamation facilities that also accept hazardous wastes generated from different industries."<sup>294</sup> Under the second option, "hazardous secondary materials that are generated and reclaimed in a continuous process within the same industry would not be eligible for the exclusion if the reclamation takes place at a facility that also recycles regulated hazardous wastes generated in a different industry."<sup>295</sup> This

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being reclaimed in a continuous process within the same industry." 2003 Preamble, *supra* note 3, at 61,574.

<sup>291</sup> *Id.* at 61,581.

<sup>292</sup> *Id.* at 61,566.

<sup>293</sup> *Id.* at 61,565.

<sup>294</sup> *Id.*

<sup>295</sup> *Id.* EPA provided the following additional analysis of this second option:

This option would, however, allow the exclusion for materials recycled within the same industry if the reclamation facility is also recycling non-hazardous wastes, or hazardous materials that are excluded from regulation under other provisions (such materials could include, for example, characteristic by-products and sludges that are not solid wastes when reclaimed according to 40 CFR 261.2(c), or materials being used as effective substitutes for commercial products under 40 CFR 261.2(e)). . . .

To illustrate this co-proposed option, if a paint manufacturer who reclaims spent solvents were to accept spent solvents from other paint manufacturers, as well as spent solvents from a generator in a different industry (e.g., an automobile repair shop), none of the spent solvents managed by the paint manufacturer would be eligible for the [2003 proposed] exclusion. . . . If, however, in this example the solvents from the automobile repair shop were excluded under a different regulatory provision (e.g., because they are reused without reclamation *see* 40 CFR 261.2(e)), the solvents generated and reclaimed within the paint manufacturing industry would be eligible for the exclusion.

*Id.*

would have resulted in fewer recycled secondary materials being excluded from classification as RCRA “solid waste,” and it was designed to make secondary materials recycled by commercial recycling facilities ineligible for exclusion from the RCRA definition of “solid waste.”<sup>296</sup>

EPA noted in its Preamble to the 2003 proposed amendments that another option existed. It would define the scope of recycled secondary materials to be excluded from RCRA’s definition of “solid waste” based upon

who uses the products of the recycling process after the secondary materials are reclaimed. Under this approach, to be eligible for the exclusion, the products from reclamation of secondary materials [would have to] be: (a) Sold to the general public if such products were considered typical products of the generating industry; or (b) reused as a product or ingredient within the generating industry, if the reclaimed material was not a typical product of the generating industry.<sup>297</sup>

EPA also noted that it was considering an additional option, under which “materials that are generated and reclaimed in a continuous process at the same site would be excluded [from being classified as RCRA solid waste], regardless of whether different industries were involved.”<sup>298</sup> Such an

on-site recycling option would not be based on the direction of the D.C. Circuit Court . . . , but rather would rest on the premise that materials recycled on-site in a continuous process are unlikely to be discarded because they would be closely managed and monitored by a single entity who is intimately familiar with both the generation and reclamation of the material, no off-site transport of the material (with its attendant risks) would occur, and there would be few questions as to potential liability in the event of mismanagement or mishap.<sup>299</sup>

In addition, EPA indicated in its commentary accompanying its 2003 proposed amendments that it also was considering “a broader regulatory conditional

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<sup>296</sup> *Id.* at 61,566.

<sup>297</sup> *Id.* at 61,566. “To illustrate this option, if a paint manufacturer received spent solvent from another paint manufacturer that s/he then reclaimed, the reclaimed solvent could not be sold to the general public and maintain the exclusion, under the assumption that solvent is not a typical product of the paint manufacturing industry. In this example, the reclaimed solvent would have to be reused within the paint manufacturing industry in order to maintain the exclusion. The paint manufacturer would thus have the option of reusing the solvent (*e.g.*, as an ingredient in making paint), or selling it to another party within the paint manufacturing industry. Under this alternative approach, if the reclaimed solvent were sold to, for example, a semi-conductor manufacturer, the incoming spent solvent would not be covered by the exclusion. This approach would, however, allow metal manufacturers to reclaim metals from excluded metal-bearing secondary materials and sell it to the general public, since metals would be a typical product of the metals industry.” *Id.* at 61,566-67.

<sup>298</sup> 2003 Preamble, *supra* note 3, at 61,575.

<sup>299</sup> *Id.*

exclusion from RCRA regulation for essentially all materials that are legitimately recycled by reclamation, whether the recycling is done within the generating industry, or between industries.”<sup>300</sup>

The proposed amendments would have “also require[d] that reclamation of excluded materials within the generating industry must produce a product or ingredient that can be used or reused without any further reclamation. This requirement [was] intended to prevent situations where excluded materials might be only partially reclaimed within the generating industry, and then sent to a different industry for one or more ‘final’ reclamation steps.”<sup>301</sup> Under the proposal, “spent materials, listed by-products and listed sludge that were generated and reclaimed in different industries would generally have remained subject to regulation as wastes,” and “materials that are ‘inherently waste-like,’ materials that are ‘speculatively accumulated,’ materials that are recycled and ‘used in a manner constituting disposal,’ and materials that are ‘burned for energy recovery,’” would continue to be classified as “solid waste” under Subtitle C of RCRA.<sup>302</sup>

EPA estimated that these proposed amendments potentially would affect more than 1,700 facilities, most of which were manufacturing industries<sup>303</sup> that generated or recycled hazardous secondary materials and that “the most common types of recyclable materials that would be affected by the rule are metal-bearing secondary materials and solvents.”<sup>304</sup> EPA estimated that the amendments would “result in a net savings to industry of approximately \$178 million per year.”<sup>305</sup>

However, some criticized EPA’s 2003 proposed amendments on the grounds that the proposed amendments could result in the mismanagement of hazardous secondary materials, potentially causing harm to the environment that would require remediation action by federal or state authorities; the critics also argued that the proposed amendments were not based upon a reasoned analysis and definition of “discarded.”<sup>306</sup>

#### VI. EPA’S 2007 PROPOSED AMENDMENTS TO ITS RCRA SUBTITLE C DEFINITION OF “SOLID WASTE”

In response to these criticisms of its 2003 proposed amendments and other comments, EPA on March 26, 2007 issued a supplemental proposal<sup>307</sup> that superseded and replaced EPA’s 2003 proposed amendments. The 2007 proposed

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<sup>300</sup> *Id.* at 61,588.

<sup>301</sup> *Id.* at 61,564.

<sup>302</sup> *Id.* at 61,564, 61,565.

<sup>303</sup> *Id.* at 61,558. EPA estimated that approximately 70% of the materials that would be potentially affected by the 2003 proposed amendments would be within the following industries: inorganic chemicals, plastic materials and resins, pharmaceutical preparations, cyclic crudes and intermediates, industrial organic chemicals, secondary smelting of nonferrous metals, plating and polishing and printed circuit boards. *Id.*

<sup>304</sup> *Id.* at 61,558.

<sup>305</sup> *Id.*

<sup>306</sup> 2008 Preamble, *supra* note 34, at 64,679; 2007 Preamble, *supra* note 3, at 14,185.

<sup>307</sup> Revisions to the Definition of Solid Waste, 72 Fed. Reg. 14,172-14,218 (March 26, 2007).

amendments would exclude additional reclaimed hazardous secondary materials from the definition of “solid waste” regulated under Subtitle C of RCRA.

“The concept of ‘discard’ [was] the central organizing idea behind” EPA’s 2007 supplemental proposal,<sup>308</sup> rather than the approach of the 2003 proposed regulations, which would have required recycling of secondary materials in a continuous process by a facility within the same NAICS industry code as the generating facility. In developing its revised 2007 proposed amendments to its definition of “solid waste,” under Subtitle C of RCRA, EPA “examine[d] the principles behind the court’s holding [in *Association of Battery Recyclers*]<sup>309</sup> on the definition of solid waste, rather than trying to fit materials into specific fact patterns addressed by the court.”<sup>310</sup> In addition, although EPA did not so state in its Preamble to the 2007 proposed regulations, EPA’s 2007 revised proposed regulations also reflect the *Safe Food and Fertilizer*<sup>311</sup> decision, which EPA discussed in commentary in the 2007 Preamble<sup>312</sup> to the proposed amendments. *Safe Food and Fertilizer* upheld an EPA regulation classifying certain spent secondary materials—those that are recycled by facilities in an industrial category different than the category of facilities that generated these recycled secondary materials—as not being “solid waste” under Subtitle C of RCRA. EPA’s commentary to the 2007 proposal stated that it revised its 2003 proposed amendments because

[a]fter evaluating the comments [to EPA’s 2003 proposed amendments], [EPA] . . . concluded that its proposed approach to ‘same industry recycling’ does not accurately delineate EPA’s RCRA jurisdiction over hazardous secondary materials”; and the agency stated that it “agree[s] with the many commentators who said that whether materials are recycled within the same NAICS code is not an appropriate indication of whether they are discarded.”<sup>313</sup>

<sup>308</sup> 2007 Preamble, *supra* note 3, at 14,178.

<sup>309</sup> 208 F.3d 1047 (D.C. Cir. 2000). The court’s holding in *Association of Battery Recyclers* is discussed *supra* notes 120-135 and accompanying text.

<sup>310</sup> 2007 Preamble, *supra* note 3, at 14,175.

<sup>311</sup> *Safe Food and Fertilizer*, 350 F.3d 1263 (D.C. Cir. 2003), *petition for reconsideration granted in part*, 365 F.3d 46 (D.C. Cir. 2004). *Safe Food and Fertilizer* is discussed *supra* notes 136-153 and accompanying text.

<sup>312</sup> 2007 Preamble, *supra* note 3, at 14,177-78.

<sup>313</sup> *Id.* at 14,185. EPA explained that:

NAICS designations are designed to be consistent with product lines, so that the effect of [EPA’s] October 2003 proposal would be that materials generated and reclaimed under the control of the generator would not be excluded [from the definition of ‘solid waste’ under Subtitle C of RCRA] even though the generator has not abandoned the material and has every opportunity and incentive to maintain oversight of, and responsibility for, the material that is reclaimed (see [*Association of Battery Recyclers*], 208 F.2d at 1051 (noting that discard has not taken place where the producer saves and reuses secondary materials)).

The 2007 proposed amendments would exempt a broader range of recycled secondary materials than the 2003 proposed amendments, while also exempting the recycled secondary materials that the 2003 proposed amendments would exempt from the definition of "solid waste" under Subtitle C of RCRA.<sup>314</sup> The approach of the 2007 proposed amendments classifies legitimately recycled hazardous secondary materials, over which the generator maintains control and which are not speculatively accumulated, as not being "solid waste" under Subtitle C of RCRA while classifying hazardous secondary materials over which the generator relinquishes control as being "solid waste" under RCRA subtitle C.<sup>315</sup> This distinction was based upon a finding that when recycling of a secondary material is under a generator's control "the material is being treated as a valuable commodity rather than a waste, [b]y maintaining control over, and potential liability for, the recycling process, the generator ensures that the materials are not discarded."<sup>316</sup>

Thus, hazardous secondary spent materials, hazardous listed sludge, hazardous listed by-products, and hazardous non-excluded scrap metals, which are legitimately reclaimed under the control of the generator<sup>317</sup> within the United States or one of its territories,<sup>318</sup> would be excluded from the Subtitle C definition of "solid waste" when handled only in non-land based units such as tanks, containers and containment buildings and when not speculatively accumulated, under the 2007 proposed amendments.<sup>319</sup> This proposed exclusion for certain

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<sup>314</sup> "EPA believes that [the 2007] supplemental proposal excludes from the definition of solid waste hazardous secondary materials recycled in a continuous industrial process by virtue of the determination that such materials that are legitimately recycled under the control of the generating facility and not speculatively accumulated are not discarded and therefore are not solid waste." *Id.* at 14,202.

<sup>315</sup> *Id.* at 14,178.

<sup>316</sup> *Id.*

<sup>317</sup> Under the 2007 proposal a hazardous secondary material would be considered "under the control of the generator" when: (1) it is generated and then reclaimed at the generating facility, or (2) it is generated and reclaimed by the same company/person (if the generator and reclaimer are under the same ownership and that owner company/person "has acknowledged full responsibility for safe management of the hazardous secondary materials"), or (3) it is generated and reclaimed according to a written agreement between a tolling contractor and batch manufacturer (under which "the tolling contractor retains ownership of, and responsibility for, the hazardous secondary materials that are generated during the course of the manufacture"). *Id.* at 14,186. This third tolling arrangement category is based upon practices of the specialty batch chemical industry. *Id.* at 14,185. EPA in commentary in its Preamble to the 2007 proposed regulations solicited comments on whether its proposed "under the control of the generator" category of exclusion should be expanded to include other types of contractual arrangements, such as where "one company . . . enter[s] into a contractual arrangement for a second company to reclaim and reuse (or return for reuse) the first company's hazardous secondary material. The first company could create a contractual instrument that exhibits the same degree of control over how the second company manages the hazardous secondary material as is found in a tolling agreement." *Id.* at 14,186.

<sup>318</sup> EPA stated that it requested comments on whether it "should promulgate a conditional exclusion for exported hazardous secondary material otherwise meeting the criteria for this [proposed] rule." *Id.* at 14,188.

<sup>319</sup> 2007 Preamble, *supra* note 3, at 14,173, 14,185-86.

recycled hazardous secondary materials would not include materials subject to recycling practices that are considered discarding, such as the recycling of inherently waste-like materials; recycling of materials that are used in a manner constituting disposal or used in products that are applied to or placed on land; or burning of materials for energy recovery or used to produce a fuel or otherwise contained in fuels.<sup>320</sup>

In addition, the 2007 proposed amendments also would exclude from the RCRA Subtitle C definition of “solid waste” certain hazardous secondary materials, “such as mineral processing residues or pulping liquors,”<sup>321</sup> which are legitimately reclaimed under the control of the generator in the United States or one of its territories, where they are contained in land-based units, such as surface impoundments and waste piles and are not speculatively accumulated.<sup>322</sup> This proposed exclusion would not require that a land-based unit “meet any particular design requirement or that the hazardous secondary materials in the unit be managed in any particular way. Rather, [EPA was] only proposing that the hazardous secondary material in the unit be ‘contained’ and not released into the environment.”<sup>323</sup> Under this proposed exclusion, “[w]hile placement on the land would not in itself constitute discard, when hazardous secondary materials are not being managed as a valuable product and, as a result, a significant release occurs, such materials would be considered discarded.”<sup>324</sup> This proposed exclusion also would not apply to materials subject to recycling practices that are considered discarding, such as recycling of materials in a manner constituting disposal or used in products applied to or placed on land; or burning of materials for energy recovery or used to produce a fuel or otherwise contained in fuels; and recycling of inherently waste-like materials.<sup>325</sup>

Under EPA’s 2007 proposed amendments,

Hazardous secondary materials released from any storage unit, whether land-based or non-land based, are discarded and if such materials upon discard would be either a listed hazardous waste or exhibit a hazardous waste characteristic, the hazardous secondary materials would be part of the waste disposal problem and would be subject to the hazardous waste regulations, unless they are immediately cleaned up.<sup>326</sup>

Under a third alternative proposed exclusion from the Subtitle C definition of “solid waste” under the 2007 proposed amendments, hazardous secondary material would be exempted from RCRA Subtitle C’s definition of “solid waste” when the generated materials were transferred directly—that is, transferred without being

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<sup>320</sup> *Id.* at 14,174.

<sup>321</sup> *Id.* at 14,186.

<sup>322</sup> *Id.* at 14,174, 14,186-87.

<sup>323</sup> *Id.* at 14,186.

<sup>324</sup> *Id.* at 14,178.

<sup>325</sup> 40 C.F.R. § 261.2(a)(ii), (iii), 261.2(c)(1), 261.2(c)(2), 261.2(d) (2008).

<sup>326</sup> 2007 Preamble, *supra* note 3, at 14,187.



routed via a broker or other middleman—to a different person or company for the purpose of reclamation, if the materials are legitimately reclaimed; are not speculatively accumulated; and are handled by both generators and reclaimers in compliance with specified conditions<sup>327</sup> intended to ensure that the recycled secondary materials are handled as commodities rather than wastes and to protect human health and the environment.<sup>328</sup> This proposed exclusion, like the proposed exclusion for materials recycled under the control of the generator, would not apply to inherently waste-like materials that are recycled, materials that are recycled in a manner constituting disposal, or to materials burned for energy recovery.<sup>329</sup>

In addition, the 2007 proposed regulations would establish a process that would allow a person to file a petition with EPA, on a case-by-case basis, to obtain a ruling that a certain recycled hazardous secondary material is not a “discarded” material that is a “solid waste” under Subtitle C of RCRA.<sup>330</sup> Such a ruling would

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<sup>327</sup> The conditions applicable to generators would include notice to EPA, or the authorized state, of the materials that would be managed under the exclusion, record keeping requirements, and a requirement that a generator exercise “reasonable efforts” through “a type of ‘environmental due diligence,’” *Id.* at 14,191, to make an assessment of any reclaimer that is not operating under a RCRA Part B permit or interim status standards, to determine that the reclaimer will legitimately recycle the generator’s materials and will manage the materials in a manner that protects human health and the environment. *Id.* at 14,189-90. EPA did not propose any specific storage requirements under this exclusion for generators, because in order for generators to qualify for this exclusion a generator could not speculatively accumulate the secondary materials being recycled, *id.* at 14,188, and EPA’s regulations governing speculative accumulation, 40 C.F.R. § 261.1(c)(8) (which is set forth *supra* note 241 and accompanying text), implicitly place time limitations on storage of recycled secondary materials. In order to qualify for this 2007 proposed exclusion, a reclaimer would be required to meet “four general conditions, which pertain to record keeping, storage of recyclable secondary materials, management of the residuals from reclamation processes, and financial assurance.” *Id.* at 14,194. “Specifically, [with respect to storage] the hazardous secondary material must be managed in a manner that is at least as protective as that employed for analogous raw materials [and in such a way that materials would not be released into the environment] . . . Where there is no analogous raw material, or if the hazardous secondary material is managed in a land-based unit, the material must be contained.” *Id.* at 14,195. (EPA stated that it considered requiring reclamation facilities to meet “much more rigorous . . . conditions equivalent to current Subtitle C requirements for storage (see, for example, the requirements for tanks and containers, which are specified in subparts I and J of 40 CFR § 264), or to a similar, but less stringent set of storage conditions (e.g., requiring the hazardous secondary material to be stored in an engineered unit),” but concluded “that an elaborate set of conditions for storage are [not] necessary for the purpose of this exclusion.” *Id.* Residuals generated by reclamation processes would be required to be managed by a reclaimer in a manner that protects human health and the environment. *Id.* at 14,195.

<sup>328</sup> *Id.* at 14,188-90. This proposed transfer-based exclusion could “involve more than one reclamation step” and therefore “would be available for materials that are recycled by means of one or more reclamation processes.” *Id.* at 14,189. The 2007 proposed amendments would require an exporter of secondary materials to another country to notify EPA and the receiving country of the export and to receive the importing country’s consent to the import, in order for the materials to be excluded from the definition of “solid waste” under Subtitle C of RCRA. *Id.* at 14,174, 14,190.

<sup>329</sup> *Id.*

<sup>330</sup> *Id.* at 14,174, 14,201-14,204. EPA’s 2007 proposed amendments would require “that hazardous secondary materials that are currently excluded with specific requirements or conditions . . . continue to meet those requirements (e.g., the drip pad requirements for the wood-preserving exclusion [under 40 C.F.R. § 261.4(a)(9)].” *Id.* at 14,176).

apply only secondary material that is recycled in a continuous industrial process; that is “indistinguishable in all relevant aspects from a product or intermediate”; or that is “under the control of the generator via a tolling arrangement or similar contractual arrangement.”<sup>331</sup>

Under EPA’s 2007 proposed amendments, residual materials resulting from an excluded recycling operation or process “are considered to be newly generated solid wastes, which can also be hazardous wastes if they exhibit a hazardous characteristic under Subpart C of Part 261 [of 40 C.F.R.] or if they are specifically listed under Subpart D of Part 261.”<sup>332</sup>

The agency’s 2007 proposed regulations also proposed changes to its 2003 proposed standards for “legitimate recycling,” which would make the 2003 proposal’s second criterion (the recycled secondary material makes a useful contribution to the recycling process or to the product of the recycling process) and the 2003 proposal’s third criterion (the product of the recycling process is valuable) into mandatory factors, each of which would have to be satisfied in order for any industrial reclamation process to be considered legitimate recycling and not sham recycling.<sup>333</sup> The 2007 proposed amendments also would change the 2003 proposed amendment’s other two legitimate recycling criteria (the method of management of the hazardous secondary materials and the nature of hazardous constituents in the product of the recycling process) by changing those two criteria into relevant, but not mandatory, considerations that would be considered on a case-by-case basis in determining if a particular recycling operation is “legitimate.”<sup>334</sup> Finally, the 2007 proposed amendment’s standards for legitimate recycling, unlike the 2003 proposed amendment’s criteria, would “not codify specific regulatory language on economics, but offers further guidance and clarification on how economics may be considered in making legitimacy determinations.”<sup>335</sup> Under EPA’s 2007 proposed amendments, economics is not considered as a mandatory factor in determining if recycling is legitimate; “[n]evertheless, the economics of a recycling activity is a consideration because it can assist in informing the useful contribution and valuable product factors of the definition of legitimate recycling.”<sup>336</sup>

EPA estimated that the 2007 proposed regulations would affect approximately 4,600 facilities in 530 industries from 17 economic sectors that generate or recycle hazardous secondary materials that are currently regulated as RCRA Subtitle C hazardous wastes,<sup>337</sup> including manufacturing and mining facilities. The agency

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<sup>331</sup> 2007 Preamble, *supra* note 3, at 14,174.

<sup>332</sup> *Id.* at 14,187.

<sup>333</sup> *Id.* at 14,198.

<sup>334</sup> *Id.* “[T]hese two factors would not be mandatory because EPA and commentators were able to identify situations in which a recycling scenario appears to be legitimate, but one of these factors was not met in the way EPA described because that factor is not applicable or relevant to the materials being recycled or to the particulars of the recycling process.” 2007 Preamble, *supra* note 3, at 14,199.

<sup>335</sup> *Id.* at 14,200.

<sup>336</sup> *Id.*

<sup>337</sup> *Id.* at 14,172.

also estimated that approximately “0.65 million tons per year of recyclable industrial materials handled by these entities may be affected, of which the most common types are metal-bearing hazardous secondary materials (e.g., sludges and spent catalysts) for commodity metals recovery, and organic chemical liquids for recycling as solvents.”<sup>338</sup>

#### VII. EPA’S 2008 FINAL RULE EXCLUDING CERTAIN RECYCLED HAZARDOUS SECONDARY MATERIALS FROM RCRA’S SUBTITLE C DEFINITION OF “SOLID WASTE”

Five years after EPA first proposed rules, and eighteen months after proposing revisions, the agency adopted final rules on October 30, 2008.<sup>339</sup> The rules became effective on December 29, 2008.<sup>340</sup> The new rules establish additional exclusions from the definition of “solid waste” subject to regulation under Subtitle C of RCRA, for a reclaimed hazardous secondary material, such as a spent material, by-product, or sludge “that, when discarded, would be identified as hazardous waste under part 261” of EPA regulations under Subtitle C of RCRA<sup>341</sup> when certain conditions are satisfied. The 2008 final rules follow the 2007 proposed rules in most respects. States to which the agency has delegated RCRA Subtitle C authority are permitted, but not required, to adopt EPA’s new 2008 final rules, which exclude certain recycled materials from the definition of solid waste under subtitle C of RCRA.<sup>342</sup>

The final rule modified the “under the control of the generator” exclusion by adding definitions of “on-site,” “land-based unit,” “control” and tolling arrangement under that exclusion, by adding additional requirements for the required notification and by expressly requiring hazardous secondary materials to be contained both in non-land based units and in land-based units.<sup>343</sup> In addition, the 2008 final rules amended the 2007 proposed rules’ transfer-based exclusion by adding a provision (discussed in more detail below) permitting hazardous secondary materials that are transferred to a reclamation facility to be held at a transfer facility for less than ten days and by adding another provision permitting (in some circumstances, as discussed below) recycled hazardous secondary materials to be sent to an intermediate facility for storage beyond the ten days before being transferred to another facility for reclamation, provided that the generator of the materials selects the reclamation facility that will be used for reclamation of the materials.<sup>344</sup> The 2008 final rules also amended the 2007 rules proposed transfer-based exception by codifying “reasonable efforts” questions that

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<sup>338</sup> *Id.*

<sup>339</sup> 40 C.F.R. §§ 261.2(a)(2)(ii), 4(a)(23), 4(a)(24), 4(a)(25).

<sup>340</sup> 2008 Preamble, *supra* note 34, at 64,668, 64,757.

<sup>341</sup> 40 C.F.R. § 260.10 (Definitions). EPA’s definition of “hazardous secondary material” is discussed *supra* note 1.

<sup>342</sup> 2008 Preamble, *supra* note 34, at 64,753-54.

<sup>343</sup> *Id.* at 64,675.

<sup>344</sup> *Id.*

a generator of secondary facility must ask both a reclamation facility and an intermediate facility before materials transferred to any such facility may be excluded from regulation under subtitle C of RCRA and by modifying requirements for notification, reporting, recordkeeping, and financial assurance.<sup>345</sup>

The new 2008 final rules also altered the 2007 proposed rules by amending the exclusions under the case-by-case non-waste determination process to limit such exclusion determinations to materials reclaimed in a continuous industrial process and to reclaimed materials which are indistinguishable from products or intermediates<sup>346</sup> and by unambiguously making the new 2008 rule's legitimate recycling requirements conditions for all of the new exclusions and non-waste determinations.<sup>347</sup>

The 2008 final rules exclude recycled hazardous secondary materials from the definition of "solid waste" under subtitle C of RCRA in three general recycling situations; the EPA considers these situations to be where recycled hazardous secondary materials are being treated as a "valuable commodity rather than as a waste"<sup>348</sup> and are being managed in a manner that is "at least as protective" of the environment and human health as the manner in which any analogous raw material is managed.<sup>349</sup> The first situation occurs when hazardous secondary materials are contained during storage to prevent releases of the material into the environment from leaks or spills from a material's storage container, and are legitimately reclaimed within the United States or its territories, in certain situations that are defined as being under the control of the materials' generator.<sup>350</sup> The second situation occurs when hazardous secondary materials are transferred by the generator to another company's reclamation facility or to an intermediate facility<sup>351</sup> before being sent to the reclamation facility for legitimate reclamation under specified conditions, including containing the materials during storage to prevent their release into the environment.<sup>352</sup> Under the second situation, the reclamation or intermediate facility to which a generator's wastes are transferred for recycling can be located either within the United States<sup>353</sup> or in a foreign country,<sup>354</sup> provided that notice of the proposed export is given to the foreign country set to receive the

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<sup>345</sup> *Id.*

<sup>346</sup> *Id.* EPA announced in its Preamble to the new 2008 final rules that it is not "finalizing the non-waste determination for materials reclaimed under the control of the generator via a tolling arrangement or similar contractual arrangement." *Id.*

<sup>347</sup> *Id.* See EPA, *Final Definition of Solid Waste Rule Frequent Questions*, <http://www.epa.gov/epawaste/hazard/dsw/dsw-faq2.htm> (Answer to the fourth-to-last question) (last visited Dec. 1 2009).

<sup>348</sup> 2008 Preamble, *supra* note 34, at 64,676.

<sup>349</sup> *Id.* at 64,678.

<sup>350</sup> 40 C.F.R. §§ 261.2(a)(2)(i), 4(a)(23).

<sup>351</sup> "Intermediate facility" is defined to mean "any facility that stores hazardous secondary materials for more than 10 days, other than a hazardous secondary material generator or reclaimer of such material." *Id.* § 260.10.

<sup>352</sup> *Id.* § 261.4(a)(24), (25).

<sup>353</sup> *Id.* § 261.4(a)(24).

<sup>354</sup> *Id.* § 261.4(a)(25).

materials<sup>355</sup> and that the foreign country consents to the import.<sup>356</sup> The third situation occurs when EPA or a state with an EPA-authorized RCRA regulatory program determines, under a case-by-case petition process, that particular hazardous secondary materials will be legitimately reclaimed, either by the materials being reclaimed in a continuous industrial process or by the materials being indistinguishable from a product or intermediate.<sup>357</sup> The exclusions under this third, non-waste determination process are not subject to “any geographic restrictions on movements of such hazardous secondary materials, provided they meet the . . . conditions of the non-waste determination [so] [i]t is therefore possible that in some cases excluded hazardous secondary materials could be generated in the United States or its territories and subsequently exported for reclamation to a facility in a foreign country.”<sup>358</sup>

EPA estimates that if the 2008 final rule is fully adopted by all states with delegated authority from the federal government to administer the RCRA Subtitle C hazardous waste program, approximately 5,600 facilities will be able to avoid regulation under subtitle C of RCRA; the change is expected to apply to about 1.5 million tons of reclaimed or recycled hazardous secondary materials—particularly metal-bearing sludge and spent catalysts and organic chemical liquid solvents—generated by those facilities, resulting in approximately \$95 million per year in savings for these facilities and conservation of virgin natural resources.<sup>359</sup>

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<sup>355</sup> *Id.* § 261.4(a)(25)(v).

<sup>356</sup> 40 C.F.R. at § 261.4(a)(25)(vi).

<sup>357</sup> *Id.* § 260.34. This new rule providing for case-specific non-waste determinations is limited to “reclamation activities and does not apply to ‘inherently waste-like materials (40 C.F.R. [§] 261.2(d)); recycling of materials that are ‘used in a manner constituting disposal,’ or ‘used to produce products applied to or on the land’ (40 C.F.R. [§] 261.2 (c)(1)); or for ‘burning of materials for energy recovery’ or materials ‘used to produce a fuel or otherwise contained in fuels’ (40 C.F.R. [§] 261.2(c)(2)).” 2008 Preamble, *supra* note 34, at 64,710. The first (continuous industrial process) category of non-waste determinations is subject to four criteria and is “not necessarily limited to cases [of a continuous industrial process] under the control of the generator.” *Id.* at 64,711. EPA’s second category of non-waste determinations (for materials indistinguishable from a product or intermediate) is subject to five criteria. *Id.* EPA in its 2008 final rules did not finalize the third type of non-waste determination which it had proposed in 2007, which would have applied to hazardous secondary materials reclaimed under the control of generator via a tolling arrangement or similar contractual arrangement, because “[E]PA could not identify any . . . other specific situations involving tolling or contractual arrangements that would not already be covered under [the] self-implementing generator-controlled exclusion.” *Id.* at 64,752. A state that has not been formally authorized by EPA to make such non-waste determinations may still participate in this exclusion process by determining that a specific hazardous secondary material meets the applicable criteria, requesting EPA to review its determination, and having EPA approve the state’s determination. 40 C.F.R. § 260.34(a).

<sup>358</sup> 2008 Preamble, *supra* note 34, at 64,718. “It is also possible that hazardous secondary materials could be generated in a foreign country and imported for reclamation in the United States.” *Id.*

<sup>359</sup> *Id.* at 64,754. EPA noted that these \$95 million in annual savings consist of approximately \$7 million per year for hazardous secondary materials reclaimed under the control of the materials’ generators, \$87 million per year cost savings for exclusion of other offsite transfers, and \$1 million per year in cost savings for case-by-case non-waste determinations. *Id.* EPA stated, however, that because of eleven numerical uncertainty factors, the future annual net benefits from the new 2008

The 2008 final rules require that hazardous secondary materials, which presently are subject to EPA's existing rules providing for exclusions from the subtitle C definition of RCRA solid waste for specific types of hazardous secondary materials, must continue to meet the existing rules' conditions or requirements in order to be excluded from the RCRA subtitle C definition of solid waste.<sup>360</sup> The final rules do not supersede or otherwise affect existing exclusions

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final rules may range "between \$19 million to \$333 million in any given future year." *Id.* EPA also noted that approximately 98% of this estimated 1.5 million tons of affected materials consist of materials "that are currently reclaimed as RCRA hazardous waste, and about 2% of hazardous waste that is currently disposed of (e.g., landfilled, incinerated, or deepwell injected), which EPA expects may switch from disposal to reclamation as a result of [the new rules]." *Id.*

The Sierra Club noted in a petition however, that this \$95 million in annual savings averages out to "average reduced costs of less than \$17,000 annually" for each of the 5,600 affected companies "a tiny fraction of the revenue that flows through many of these multi-million dollar companies." Earth Justice, *Definition of Solid Waste Petition for Reconsideration*, 5 (2009), [http://www.earthjustice.org/library/legal\\_docs/definition-of-solid-waste-petition-for-reconsideration-final.pdf](http://www.earthjustice.org/library/legal_docs/definition-of-solid-waste-petition-for-reconsideration-final.pdf) (last visited Jan. 26, 2010) [hereinafter Sierra Club petition] (submitted on Sierra Club's behalf by Earthjustice to EPA Administrator Lisa Jackson on January 29, 2009 and seeking reconsideration and repeal by EPA of the 2008 final rules redefining solid waste under Subtitle C of RCRA). The Sierra Club petition also asserts that EPA's *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (EPA-HQ-RCRA-2002-0031-0602 (2008) at 13 [hereinafter EPA Regulatory Impact Analysis], "reveals that the Rule will induce only 23,000 tons per year in additional hazardous waste recycling . . . [which] amounts to only about 1.1% increase above the 2005 baseline of 2.045 million tons per year." Sierra Club petition, at 5 (petition's citations to p.10 of EPA Regulatory Impact analysis omitted). The Sierra Club petition asserts that "[w]hat these figures show is that a substantial amount of hazardous waste recycling was occurring despite the more stringent RCRA regulation in place before promulgation of the [new 2008] . . . rule and that the [new 2008] . . . rule will not materially increase this amount . . . [; and] [t]hus the record is clear that the significant increase of risk of harm to human health and the environment caused by the exemption of generators, middleman and recyclers from management requirements will *not* be accompanied by meaningful gains in resource conservation or strategy." Sierra Club petition at 5. The Sierra Club petition further notes that the EPA Regulatory Impact Analysis "found that changing the assumptions about how state regulators and companies are likely to react to the Rule could lower the economic benefits to as little as \$19 million per year . . . [and that] both the \$19 million and the \$95 million estimates ignore the costs of increased health and environmental damage that are likely to result from this Rule." Sierra Club petition, *supra*, at 5. The Sierra Club petition also asserts that "the majority of these cost savings (82%) accrue from deregulating the baseline recycling . . . and [that] EPA estimates that only \$16.7 million per year (18% of the annual impact) will be generated by the switch from disposal to recycling." Sierra Club petition, at 5 (Sierra Club's citations to p.9 of the EPA Regulatory Impact Analysis deleted). The Sierra Club petition also noted that EPA's new 2008 rules may result in the loss of jobs at presently RCRA licensed hazardous waste recycler facilities which are no longer required to handle hazardous wastes which are exempted by the new 2008 rules from regulation under Subtitle C of RCRA. Sierra Club petition, at 5.

<sup>360</sup> 40 C.F.R. §§ 261.4(a)(23)(iv), (24)(iv). The effect of these provisions is that exclusion from the RCRA subtitle C definition of solid waste is not available under the new 2008 final rules for broken cathode ray tubes which are subject to exclusion under 40 C.F.R. § 261.4(a)(22), for shredded circuit boards subject to exclusion under 40 C.F.R. § 261.4(a)(14), for spent wood preserving solutions subject to exclusion under 40 C.F.R. § 261.4(a)(9), for mineral processing spent materials subject to exclusion under 40 C.F.R. § 261.4(a)(17), for spent caustic solutions from petroleum liquid treating processes subject to exclusion under 40 C.F.R. § 261.4(a)(19), or for spent lead-acid batteries subject to exclusion under 40 C.F.R. § 266.80 and 40 C.F.R. § 273. 2008 Preamble, *supra* note 34, at

from the definition of "solid waste" under subtitle C of RCRA that have occurred under existing RCRA rules, variances, letters of interpretation, and inspection reports.<sup>361</sup>

Furthermore, no exclusion from the RCRA subtitle C definition of hazardous waste is available under the 2008 rules for hazardous secondary materials that are (1) speculatively accumulated; (2) considered inherently waste-like; (3) used in a manner constituting disposal or used to produce products applied to or placed on land; or (4) burned for recovery of energy, used to produce a fuel, or otherwise contained in a fuel.<sup>362</sup>

The final rules recognize three different general situations when legitimate reclamation of hazardous secondary materials will be considered "under the control of the generator" of the materials: (1) when the recycling is performed on-site at the facility where the materials were generated;<sup>363</sup> (2) when the recycling is performed off-site at a different facility when the reclaiming or recycling facility is controlled by the person or same company that controls the facility that generated the materials;<sup>364</sup> and (3) when the recycling is performed under a tolling arrangement, under which a tolling contractor enters into a contract with a manufacturer to have the manufacturer produce a product and that manufacturing process generates a residual hazardous secondary material that is returned to and reclaimed or recycled by the tolling contractor.<sup>365</sup>

The new "under the control of the generator" exclusions do not affect hazardous secondary materials already excluded from the RCRA subtitle C definition of solid waste under EPA's existing rule,<sup>366</sup> which excludes hazardous secondary materials which are recycled in a closed-loop system because EPA's

64,713-14. EPA will continue to regulate recycled spent lead-acid batteries as hazardous waste under RCRA under 40 C.F.R. § 266.80 and 40 C.F.R. § 273. *Id.* at 64,714. In addition, because EPA is planning to propose a new regulation to conditionally exclude from the RCRA subtitle C definition of solid waste spent hydrotreating and hydrorefining catalysts (waste codes K171 and K172), 73 Fed. Reg. at 64714, these types of spent catalysts are not eligible for exclusion under the new 2008 final rules. 40 C.F.R. §§ 261.4(a)(23)(iv), (24)(iv).

<sup>361</sup> 2008 Preamble, *supra* note 34, at 64,713.

<sup>362</sup> *Id.* at 64,669, 64,670. See 40 C.F.R. §§ 261.2(a)(2), 261.4(a)(23), (a)(24).

<sup>363</sup> 40 C.F.R. § 260.10 (first subsection of definition of "Hazardous secondary material generated and reclaimed under the control of the generator"). "[F]or purposes of this definition, generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator . . . ." *Id.* "For the purposes of § 261.2(a)(2)(ii) and § 261.4(a)(23), a facility that collects hazardous secondary materials from other persons is not the hazardous secondary material generator." 40 C.F.R. § 260.10 (Definition of "Hazardous secondary material generator").

<sup>364</sup> *Id.* § 260.10 (second subsection of the definition of "Hazardous secondary material generated and reclaimed under the control of the generator"). "For purposes of this paragraph, 'control' means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in § 260.10 shall not be deemed to 'control' such facilities . . . ." *Id.*

<sup>365</sup> *Id.* § 260.10 (third subsection of the definition of "Hazardous secondary material generated and reclaimed under the control of the generator").

<sup>366</sup> 40 C.F.R. § 261.4(a)(8) (which "is not specific to a [particular] material, but rather identifies a recycling process," 2008 Preamble, *supra* note 34, at 64,714).

“closed-loop exclusion is based on the premise that hazardous secondary materials reclaimed in a continuous process are not discarded and, therefore, are not solid waste.”<sup>367</sup> Even though the “EPA believes [that], in most instances, hazardous secondary materials reclaimed in a continuous process would be excluded” from the definition of RCRA subtitle C solid waste under the 2008 final rules’ “self-implementing exclusions,”<sup>368</sup> EPA “did not make a finding that any particular hazardous secondary material must be reclaimed in a continuous process.”<sup>369</sup> Because EPA’s new exclusions under the 2008 final rules “allow any hazardous secondary materials to be excluded if reclamation meets the restrictions and/or conditions set forth in the rule . . . , a facility currently engaged in closed-loop recycling could change their processes and still be excluded, so long as all applicable restrictions and/or conditions are met.”<sup>370</sup>

For a tolling arrangement to qualify for the 2008 final rules’ “under the control of the generator” exclusion, the tolling contractor must retain ownership of, and responsibility for, the residual hazardous secondary materials manufactured by another company, under an arrangement through which the tolling contractor essentially outsources a step in its manufacturing process. Under these circumstances, EPA’s 2008 final tolling arrangement rule considers the residual material to have been generated by the tolling contractor, even though it was physically generated by another company, and also considers the management and recycling of the residual hazardous secondary materials to be “under the control” of the tolling contractor.

The exclusion under the 2008 final rules for hazardous secondary materials legitimately reclaimed under the control of the materials’ generator permits the recycled materials to be contained during storage either in a non-land based unit,<sup>371</sup> such as tanks, containers, or containment buildings,<sup>372</sup> or in a land-based unit,<sup>373</sup> which is an area where materials are placed in or on land, other than land-based production units,<sup>374</sup> such as a surface impoundment or pile.<sup>375</sup> EPA’s 2008 final rules recognize that storage of raw materials on land is a normal part of some manufacturing operations and that therefore land storage of materials is not a specific indicator of either “discard” or of “sham recycling.” As a result of the definition of “under the control of the generator,” the “under the control of the generator” recycling exclusion does not apply to materials generated at one person’s or one company’s facility, which are reclaimed or recycled at the facility

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<sup>367</sup> *Id.* at 64,714. “. . . [C]losed loop recycling is a subset of materials reclaimed in a continuous industrial process, since materials may be reclaimed in a continuous process outside of a closed loop system.” *Id.*

<sup>368</sup> *Id.* at 64,711.

<sup>369</sup> *Id.* at 64,714.

<sup>370</sup> *Id.*

<sup>371</sup> 40 C.F.R. § 261.2(a)(2)(ii).

<sup>372</sup> 2008 Preamble, *supra* note 34, at 64,669.

<sup>373</sup> 40 C.F.R. § 261.4(a)(23).

<sup>374</sup> *Id.* § 260.10 (Definition of “Land-based unit”).

<sup>375</sup> 2008 Preamble, *supra* note 35, at 64,669.



of another person or company that collected the materials from the generator's facility.

Furthermore, the "under the control of the generator" exclusion only applies to reclamation operations conducted under a generator's control within the United States or its territories.<sup>376</sup> One reason for this limitation is that the "under the control of the generator" exclusion "is subject to few restrictions and is largely based on the assumption that hazardous secondary materials are unlikely to be discarded because they would be closely managed and monitored by a single entity . . . , [but] this same assumption does not pertain to exports of hazardous secondary materials because EPA would not be able to ensure the close management and monitoring by a single entity of hazardous secondary materials in a foreign country."<sup>377</sup> For similar reasons, the "under the control of the generator" exclusion does not apply to materials that a person imports into the United States from a foreign country, because the "EPA would not be able to ensure the close management and monitoring of the hazardous secondary materials by a single entity in a foreign country."<sup>378</sup>

A generator, intermediate facility, or reclamation facility seeking the exemption for hazardous secondary materials reclaimed "under the control of the generator" must submit a notification to the appropriate EPA regional administrator or to a state with delegated RCRA subtitle C regulatory authority; the notification provides specified information with respect to reclamation of the excluded materials.<sup>379</sup> Such a notification must include a list of the types and quantities of the materials to be reclaimed, whether the materials are being contained in a land-based unit, when the reclamation under the exclusion will begin, and the exclusion under which the materials are being managed. A generator's failure to provide the required notification is considered to be a violation of RCRA, but will not affect the excluded status of recycled hazardous secondary materials.<sup>380</sup> The required notifications will be used by EPA and states to determine the facilities that should receive greater regulatory oversight and to provide the basis for setting enforcement priorities.<sup>381</sup>

As mentioned, the second general situation in which recycled materials are excluded from the definition of Subtitle C solid waste under the 2008 final rules

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<sup>376</sup> 40 C.F.R. §§ 261.2(a)(ii), 261.4(a)(23).

<sup>377</sup> 2008 Preamble, *supra* note 34, at 64,738. In the Preamble to EPA's proposed 2007 rules which proposed this limitation on the "under the control of the generator" exclusion, EPA also stated that it was proposing to limit the "under the control of the generator" exclusion for non-land based units to hazardous secondary materials reclaimed within the United States or U.S. territories "because it does not have sufficient information related to recycling activities outside of the United States and its territories . . . ." 2007 Preamble, *supra* note 3, at 14173 n.2.

<sup>378</sup> 2008 Preamble, *supra* note 34, at 64,699, 64,738. An importer of hazardous secondary materials is eligible for the 2008 final rules' transfer-based exclusion, "provided that the person who imports the hazardous secondary material fulfills all requirements and conditions (e.g., notification, reasonable efforts, recordkeeping) for a hazardous material generator under 40 C.F.R. [§] 261.4(a)(24)." *Id.* at 64,699.

<sup>379</sup> 40 C.F.R. § 260.42.

<sup>380</sup> 2008 Preamble, *supra* note 34, at 64,739.

<sup>381</sup> *Id.*

arises when generated hazardous secondary materials are transferred to another person for the purpose of legitimate reclamation.<sup>382</sup> (This transfer exclusion does not apply to material “otherwise subject to material-specific management conditions” under paragraph (a) of 40 C.F.R. § 261.4, when reclaimed, a spent lead-acid battery, or material that meets the listing description for K171 or K172 in 40 C.F.R. § 261.32.) This second exclusion applies both when the person or company that generates hazardous secondary materials transfers the materials to another person’s reclamation facility and when the generator transfers such materials to another person’s intermediate facility (defined as “any facility that stores hazardous secondary materials for more than 10 days, other than a hazardous secondary material generator or reclaimer of such material”<sup>383</sup>), if certain conditions are satisfied.<sup>384</sup>

The 2008 final rules amended the 2007 proposed amendments to authorize the second, “transfer-based” exclusion to apply to hazardous secondary materials that are sent to an intermediate facility selected by the materials’ generator, for storage for more than ten days, to allow economical consolidation of shipments of hazardous secondary materials generated in small quantities by small businesses.<sup>385</sup> However, such intermediate facilities must meet the same conditions that are applicable to reclamation facilities under the transfer-based exception.<sup>386</sup> In addition to allowing hazardous secondary materials to be stored temporarily at intermediate facilities, “[this] transfer-based exclusion [also] . . . is available for hazardous secondary materials that are recycled by means of one or more reclamation processes, including when they occur at more than one facility.”<sup>387</sup>

The 2008 final rule amended the 2007 proposed amendments also to authorize recycled hazardous materials to be transported to a transfer facility<sup>388</sup> selected by the material’s generator for temporary storage “during the normal course of transportation,” prior to being sent to a reclamation facility, if the materials remain at the transfer facility for less than ten days<sup>389</sup> and the materials are contained at the transfer facility during temporary interim storage.<sup>390</sup> At a transfer facility

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<sup>382</sup> 40 C.F.R. § 261.4(a)(24) (2008).

<sup>383</sup> *Id.* § 260.10. “If an intermediate facility treats the hazardous secondary materials or commingles it with other hazardous secondary materials or with hazardous waste, it would not be eligible as an ‘intermediate facility’ as defined in § 260.10....” 2008 Preamble, *supra* note 34, at 64730.

<sup>384</sup> *Id.* § 261.4(a)(24).

<sup>385</sup> 2008 Preamble, *supra* note 34, at 64,684.

<sup>386</sup> *Id.*

<sup>387</sup> *Id.*

<sup>388</sup> “Transfer facility” is defined as “any transportation-related facility, including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste [or hazardous secondary materials] are held during the normal course of transportation.” 40 C.F.R. § 260.10 (2008).

<sup>389</sup> *Id.* § 261.4(a)(24)(ii).

<sup>390</sup> *See id.* § 261.4(a)(24)(v)(A).

“[h]azardous secondary materials may be consolidated for shipping, but cannot be intermingled in a way that would constitute waste management.”<sup>391</sup>

The conditions for the transfer-based exclusion include a condition<sup>392</sup> requiring a reclamation facility or intermediate facility to comply with financial assurance requirements<sup>393</sup> and a condition<sup>394</sup> requiring compliance with the same notification requirements required by the “under the control of the generator” exclusion. In addition, to qualify for the transfer-based exclusion, a reclamation facility or intermediate facility must legitimately recycle a generator’s hazardous secondary materials,<sup>395</sup> must contain the materials being recycled, both in land-based units and in non-land based units,<sup>396</sup> and “must manage the materials in a manner that is at least protective as that employed for any analogous raw materials,”<sup>397</sup> storing recycled materials in a manner that treats them as valuable non-discarded commodities which will be used and not “lost to the environment.”<sup>398</sup> In addition, for a reclamation or intermediate facility to qualify for the transfer-based exclusion, a facility must manage any residual materials, which result from recycling of a generator’s hazardous secondary materials, in a manner that protects human health and the environment, with the reclamation facility sending hazardous residuals to a permitted waste management facility if the reclamation facility is not permitted to manage the hazardous residuals.<sup>399</sup> This transfer-based exclusion applies to materials whose recycling involves reclamation only, such as spent materials, listed sludge and listed by-products, and such a transfer “would not be available for hazardous secondary materials that are regulated as hazardous wastes for other reasons, such as ‘inherently waste-like materials,’ materials that are ‘used in manner constituting disposal,’ or ‘materials burned for energy recovery.’”<sup>400</sup>

For a generator to have its recycled materials excluded under this transfer-based exclusion, the generator must make “reasonable efforts” to ensure that the materials are safely and legitimately recycled by both any intermediate facility and by the reclamation facility.<sup>401</sup> The “reasonable efforts” requirement is viewed by

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<sup>391</sup> 2008 Preamble, *supra* note 34, at 64,690. A broker (“a person who helps arrange for the transfer of hazardous waste or hazardous secondary material, but does not take possession of the material or manage it in any way,” *id.* at 64,730) who never takes possession of hazardous secondary materials is not affected or addressed by EPA’s new 2008 final rule. *See id.*

<sup>392</sup> 40 C.F.R. § 261.4(a)(24)(vi)(F) (2008).

<sup>393</sup> 40 C.F.R. Part 261 Subpart H (40 C.F.R. §§ 261.140-.151 (2008)). EPA views the financial assurance requirements for reclamation and intermediate facilities under the transfer-based exclusion as being functionally equivalent to the financial assurance requirements for hazardous waste treatment storage and disposal facilities, although they have “been tailored to apply to hazardous secondary materials recycling.” 2008 Preamble, *supra* note 34, at 64,692.

<sup>394</sup> *See* 40 C.F.R. § 261.4(a)(24)(vii).

<sup>395</sup> *Id.* § 261.4(a)(24)(iv).

<sup>396</sup> *Id.* § 261.4(a)(17)(v).

<sup>397</sup> *Id.* § 261.4(a)(24)(vi)(D).

<sup>398</sup> 2008 Preamble, *supra* note 34, at 64,691.

<sup>399</sup> 40 C.F.R. § 261.4(a)(24)(vi)(E) (2008).

<sup>400</sup> 2008 Preamble, *supra* note 34, at 64,684.

<sup>401</sup> 40 C.F.R. § 261.4(a)(24)(v)(B) (2008).

EPA as a form of “environmental due diligence” and as the existing best practices currently conducted by many generators of hazardous secondary materials.<sup>402</sup> To comply with the “reasonable efforts” requirement, a generator must address a number of questions specified in the 2008 final rules to each intermediate facility and reclamation facility to which the generator’s hazardous secondary materials are sent.<sup>403</sup> The mandatory questions relate to whether reclamation will be legitimate, as well as each facility’s environmental compliance history, each facility’s technical capacity to safely manage and recycle both the generator’s materials and any residual materials that remain after the recycling or reclamation of the generator’s materials, and each facility’s compliance with notification requirements, including notification of compliance with financial assurance requirements.

A generator, however, is not required to ask each intermediate and reclamation facility questions related to the financial health of the facilities.<sup>404</sup> A generator does not have to ask the questions if the transfer is a small-quantity generator of less than one hundred kilograms of hazardous waste in a single month, given that their wastes already are excluded from regulation under subtitle C of RCRA<sup>405</sup> or if it sends its materials to a reclamation facility with an RCRA Part B permit or RCRA interim status extending to management of the hazardous secondary materials in question;<sup>406</sup> this is so because EPA believes that such RCRA-permitted facilities will manage and reclaim excluded hazardous secondary materials safely and legitimately.<sup>407</sup> If a generator complies with the “reasonable efforts” and other requirements of the transfer-based exclusion but an intermediate facility or reclamation facility fails to comply with the exclusion’s requirements, the generator’s materials will not be considered solid waste discarded by the generator, but will be considered to be solid waste discarded by the facility that failed to meet the exclusion’s requirements.<sup>408</sup>

This second, “transfer-based” exclusion, unlike the first, “under the control of the generator” exclusion, which only applies when reclamation occurs at a facility located within the United States or one of its territories,<sup>409</sup> does not have any geographical limitations.<sup>410</sup> A generator of hazardous secondary materials is

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<sup>402</sup> 2008 Preamble, *supra* note 34, at 64,685.

<sup>403</sup> 40 C.F.R. § 261.4(a)(24)(v)(B) (2008).

<sup>404</sup> 2008 Preamble, *supra* note 34, at 64,686.

<sup>405</sup> EPA, *Definition of Solid Waste*, <http://www.epa.gov/epawaste/hazard/dsw/dsw-faq2.htm> (answer to the question, “What kind of ‘reasonable efforts’ must generators make for intermediate facilities and for reclaimers?”) (last visited on Sept. 22, 2009). Also, such small-quantity generators “may continue to send their hazardous wastes to the same types of facilities that are currently eligible to receive their wastes” under 40 C.F.R. § 261.5. *Id.*, (answer to question, “Are conditionally exempt small-quantity generators (CESQGs) required to make ‘reasonable efforts?’”).

<sup>406</sup> See 40 C.F.R. § 261.4(a)(24)(v)(B); 2008 Preamble, *supra* note 34, at 64,686.

<sup>407</sup> 2008 Preamble, *supra* note 34, at 64,686.

<sup>408</sup> *Id.* at 64,699-700.

<sup>409</sup> 40 C.F.R. §§ 261.2(a)(2)(ii), 4(a)(23).

<sup>410</sup> 2008 Preamble, *supra* note 34, at 64,718. An importer of hazardous secondary material is eligible for the transfer-based exclusion, “provided that the person who imports the hazardous secondary material fulfills all requirements and conditions (e.g., notification, reasonable efforts,

permitted under this transfer-based exclusion to export materials from the United States to an intermediate facility or reclamation facility in a foreign country—even though “[f]oreign reclaimers and foreign intermediate facilities are not subject to U.S. regulations . . . [and] cannot comply with the notification and financial assurance requirements . . .”<sup>411</sup>—provided that certain conditions are met. These conditions include requirements that the generator notifies the appropriate EPA regional administrator of the proposed export, that EPA notifies the importing foreign country of the proposed import of hazardous secondary materials into that country and that EPA receives that country’s consent to that import.<sup>412</sup> EPA permits the export of hazardous secondary materials to a privately-owned intermediate facility or reclamation facility located in a foreign country under this transfer-based exclusion despite having no power under RCRA or other United States laws that regulate such facilities in foreign countries. Similarly, EPA’s new 2008 non-waste determination rules, for determining that a particular reclaimed hazardous secondary material is not a discarded hazardous solid waste subject to regulation under Subtitle C of RCRA—either because it is reclaimed in a continuous industrial process or because the reclaimed materials are indistinguishable from a product or an intermediate—also can apply to materials which are recycled at reclamation facilities located in a foreign country.<sup>413</sup> However, EPA’s new 2008 rules limit the “under the control of the generator” exclusion to materials recycled or reclaimed at facilities located within the United States and its territories because EPA lacks authority under RCRA to monitor and inspect reclamation facilities located within foreign countries.<sup>414</sup>

This reason for not extending the “under the control of the generator” exclusion to the reclamation of materials in a foreign country should govern all of the exclusions available under EPA’s new 2008 regulations defining when recycled hazardous secondary materials are not discarded solid wastes subject to regulation by EPA under Subtitle C of RCRA. EPA has no authority under RCRA to monitor, inspect, or regulate recycling or reclamation operations occurring at recycling and reclamation facilities located in foreign countries. Furthermore, hazardous secondary materials exported from the United States to a reclamation facility located in a foreign nation could leak or spill from unsuitable containers which are not properly regulated by the foreign nation, causing harm to the health of people and to the environment in the foreign nation. EPA, therefore, should amend its new 2008 regulations to provide that hazardous secondary materials that are recycled or reclaimed at a facility located within a foreign country cannot be exempted from regulation by EPA under Subtitle C of RCRA through the “under the control of the generator” exclusion, of the “transfer-based” exclusion, or under the non-waste determination process established by the new 2008 rules.

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recordkeeping) for a hazardous material generator under 40 C.F.R. [§] 261.4(a)(24) . . . .” *Id.* at 64,699.

<sup>411</sup> *Id.* at 64,698.

<sup>412</sup> 40 C.F.R. § 261.4(a)(25) (2008).

<sup>413</sup> See *supra* notes 357-58 and accompanying text.

<sup>414</sup> See *supra* notes 376-78 and accompanying text.

The 2008 rules codify the criteria for determining if reclamation or recycling is “legitimate,”<sup>415</sup> in the form proposed by the 2007 proposed amendments. The 2008 final rules require that recycled hazardous secondary materials must meet the following two criteria in order for reclamation or recycling of these materials to be considered “legitimate”: (1) the materials must provide a useful contribution to the recycling process or to a product or intermediate of the recycling process; and (2) the recycling process must produce a valuable product or intermediate.<sup>416</sup> The 2008 final rules also require that two additional non-mandatory factors be taken into account in determining whether reclamation or recycling is “legitimate”: (1) whether the recycled material is managed as a valuable product; and (2) whether the recycled product contains toxic constituents at significantly greater levels than a non-recycled product made from virgin materials.<sup>417</sup> Reclamation or recycling may be considered “legitimate” under the 2008 final rules even if one or both of these two non-mandatory factors are not satisfied.<sup>418</sup> The Preamble to EPA’s 2008 final rules also identifies non-mandatory economic factors that can be taken into account in determining if reclamation or recycling is “legitimate” in accordance with the 2008 final rules,<sup>419</sup> although EPA’s 2008 final rules do not codify “specific regulatory language on economic considerations”<sup>420</sup> because “economic considerations are inherent within the legitimacy factors.”<sup>421</sup>

EPA’s 2008 final rules also require that reclaimed or recycled hazardous materials be contained by the generator, both when the reclamation or recycling takes place under the generator’s control<sup>422</sup> and when the generator transfers materials to an intermediate facility and/or reclamation facility,<sup>423</sup> and by another person’s reclamation or intermediate facility to which the material’s generator transfers the materials for reclamation or recycling.<sup>424</sup> EPA has stated that in order to be considered “contained” in compliance with the 2008 final rules, materials must be “placed in a unit that controls the movement of the material out of the unit into the environment,”<sup>425</sup> although the Sierra Club has noted that “EPA set no standards for what counts as ‘control,’ so there are no objective means to determine when hazardous materials have been ‘contained.’”<sup>426</sup>

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<sup>415</sup> 40 C.F.R. § 260.43 (2008).

<sup>416</sup> *Id.* § 260.43(b).

<sup>417</sup> *Id.* § 260.43(c).

<sup>418</sup> 2008 Preamble, *supra* note 34, at 64,701.

<sup>419</sup> *Id.* at 64,706-7.

<sup>420</sup> *Id.* at 64,750.

<sup>421</sup> *Id.* at 64,749.

<sup>422</sup> 40 C.F.R. §§ 261.2(a)(2)(ii), .4(a)(23)(i) (2008).

<sup>423</sup> *Id.* § 261.4(a)(24)(v)(B).

<sup>424</sup> *Id.* § 261.4(a)(24)(vi)(D).

<sup>425</sup> 2008 Preamble, *supra* note 34, at 64,748. Elsewhere in its Preamble to the new 2008 rules, EPA indicated that in order for materials to be considered “contained” within the meaning of the 2008 rules the materials must be managed in the same way that any raw materials, intermediates or byproducts are managed because of their value and must be placed either in a non-land based unit or in a land-based unit that controls the movement of the material out of the container into the environment. *Id.* at 64,681.

<sup>426</sup> Sierra Club petition, *supra* note 359, at 7.

EPA rejected inclusion in its 2008 final rules definition of “contained” of either (1) requirements for inspections of containers temporarily storing recycled hazardous secondary materials or for further technological or engineering conditions for containers, such as EPA’s regulations<sup>427</sup> under subtitle C of RCRA for storage of hazardous solid waste; or (2) standards requiring a container to be compatible with the materials stored in it, secondary containment, liners or leak detection systems.<sup>428</sup> EPA rejected suggestions that such engineering conditions should have to be satisfied in order for temporarily stored materials, undergoing reclamation or other recycling, not to be considered discarded solid waste, on the ground that the new 2008 final rules are linked to the definition of discarding, rather than specification of particular technology that may not be appropriate in some cases.<sup>429</sup> EPA’s explanation is “that detailed standards are not necessary to determine that valuable materials destined for recycling are not discarded” solid waste and that regulatory authorities can identify hazardous materials that have been released from a storage container unit and determine that released materials are discarded solid waste.<sup>430</sup> EPA also based its rejection of specific technological or engineering conditions in its definition of “contained” upon the fact that other federal statutes—such as the Occupational Safety and Health Act, the Hazardous Materials Transportation Act of 1975, the Transportation Uniform Safety Act of 1990, CERCLA, and EPRCA—seek to protect human health and the environment,<sup>431</sup> although EPA did not refer to any specific requirements under these statutes that would require compliance with specific technological or engineering conditions for the storage and containment of recycled hazardous secondary materials. EPA asserted that (1) detailed technological or engineering conditions are not necessary for hazardous secondary materials that are handled as valuable products destined for recycling; and (2) that regulatory authorities can determine whether such materials in a storage unit are “contained” by considering all site-specific circumstances, noting that local conditions greatly affect whether materials managed in surface impoundments are likely to leak.<sup>432</sup> EPA stated, however, that the determination of whether hazardous secondary materials are “contained” in a facility’s storage unit may be based upon any or all of the measures used by the facility, including liners, leak detection systems, inventory tracking and control of releases, monitoring, and inspections.<sup>433</sup> EPA also indicated that a facility’s compliance with a state’s regulatory standards for hazardous secondary materials storage units can be a factor considered by regulatory authorities in determining if such materials are “contained” in a storage unit.<sup>434</sup>

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<sup>427</sup> 40 C.F.R. §§ 264.17(a), .90-.101, .170-.179, .190-.200, .220-.232, & .250-.259 (2008).

<sup>428</sup> 2008 Preamble, *supra* note 34, at 64,719, 64,729.

<sup>429</sup> *Id.*

<sup>430</sup> *Id.* at 64,729.

<sup>431</sup> *Id.* at 64,719.

<sup>432</sup> *Id.* at 64,729.

<sup>433</sup> *Id.*

<sup>434</sup> *Id.*

EPA should amend the 2008 rules to specify design and performance standards for the storage and containment of hazardous secondary materials that are being recycled and reclaimed, and these amendments should be similar to EPA's regulations<sup>435</sup> under Subtitle C of RCRA for the storage and containment of hazardous wastes in tank systems, surface impoundments, waste piles, and other types of containers.<sup>436</sup> These EPA regulations governing the storage and containment of hazardous wastes contain general design and performance standards to prevent leaking and spilling of stored and contained hazardous wastes, which may result either (1) from rusting, corroding or breaching of the exterior of a storage container due to natural or other outside forces<sup>437</sup> or (2) from corrosion or breaching of the interior of a storage container due to the hazardous corrosivity, ignitability, or reactivity characteristics of a hazardous waste.<sup>438</sup> EPA should set similar general standards for containers storing hazardous secondary materials that are being recycled or reclaimed, because such containers also are subject to leaking or spilling either due to external rusting, corrosion, or breaching caused by natural or other outside forces or due to internal corrosion or other breaching caused by a material's hazardous corrosive, ignitable or reactive characteristics. EPA's standards for storage and containment of hazardous waste, however, could be modified appropriately for storage and containment of recycled hazardous

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<sup>435</sup> 40 C.F.R. §§ 264.17(a), .90-.101, .170-.179, .190-.200, .220-.232, & .250-.259 (2008).

<sup>436</sup> Sierra Club petition, *supra* note 359, requests that EPA reconsider and repeal EPA's 2008 final rule and stay implementation of the rule "as soon as possible," *id.* at 1; arguing in part that the 2008 final rule is arbitrary and capricious because the rule does not define "contained," "containment"; or "controls," *id.* at 6-7. In its petition the Sierra Club notes that "some industry commenters asked that baseline design criteria for storage be included in the Rule." *Id.* at 7 (citations omitted).

<sup>437</sup> See, e.g., 40 C.F.R. §§ 264.17(a) & 264.198(a)(2) (ignitable and reactive hazardous wastes that are stored must be protected from sources of ignition or reaction such as open flames, sparks and radiant heat); 264.171 (container holding hazardous waste should not have severe rusting); 264.191(b)(3) & .192(a) (tank system storing hazardous waste must have corrosion protection measures and components to protect against adverse impacts from vehicular traffic, frost heave, flotation or dislodgement due to saturation, and seismic forces); 264.221(a)(1) (surface impoundment storing hazardous waste must have a liner which is constructed of appropriate materials to prevent failure due to climatic conditions); 264.251(a)(1)(i) (pile storing hazardous waste must have liner constructed of appropriate materials to prevent failure due to climatic conditions).

<sup>438</sup> See, e.g., *id.* §§ 264.172 (hazardous waste storage container must be lined with materials which will not react with or otherwise be incompatible with hazardous wastes stored in the container); 264.191(b) & .192(a) (tank system for storing waste must have sufficient structural strength and compatibility with the wastes to be stored to ensure that it will not collapse, rupture or fail); 264.194(a) (hazardous wastes must not be placed in a tank system if they could cause the tank to rupture, leak, corrode, or otherwise fail); 264.198(a)(2) (ignitable or reactive hazardous waste must be stored in a tank system in such a way that it is protected from any materials or conditions which may cause the waste to ignite or react); 264.221(a)(1) (surface impoundment storing hazardous waste must have a liner which is constructed of appropriate materials to prevent failure due to physical contact with the waste or leachate to which they are exposed); 264.251(a)(1)(i) (pile storing hazardous waste must have liner constructed of appropriate materials to prevent failure due to physical contact with the waste or leachate to which they are exposed); 264.256 (pile storing ignitable or reactive hazardous waste must manage such waste in a manner to protect the waste from any material or conditions which may cause it to ignite or react).



secondary material to account for the normally shorter period of storage and containment of hazardous secondary materials being recycled or reclaimed, in contrast to the permanent or indefinite storage period for hazardous waste.

The absence of such standards is not offset by vague and imprecise commentary in the Preamble to EPA's 2008 final rules. The Preamble states (1) that only small and "insignificant" releases of contained materials into the environment are permitted from a container;<sup>439</sup> (2) that any contained materials that are released into the environment and not immediately recovered are considered discarded "solid waste" under subtitle C of RCRA;<sup>440</sup> (3) that materials in a container from which there is a release may be considered discarded solid waste if the materials in the container are not managed as valuable material and as a result there are significant releases of the material into the environment that are not immediately recovered;<sup>441</sup> and (4) that if only small and insignificant releases of a contained material occur and those releases are immediately recovered, the remainder of the contained material being reclaimed or recycled is still considered not discarded "solid waste" under subtitle C of RCRA.<sup>442</sup>

[T]he preamble does not provide any criteria for what counts as a "significant release," and the body of the Rule does not even mention the phrase, much less offer an intelligible measure by which to interpret it. Without any basis for determining when hazardous materials are contained or when there is a significant release of them to the environment, generators and recyclers will never be certain about their compliance, and state inspectors will have no basis for making individual enforcement determinations.<sup>443</sup>

## VIII. CONCLUSION

EPA stated that it expected that its 2008 final rule would "encourage and expand the safe, beneficial recycling of additional hazardous secondary materials"<sup>444</sup> by American industry and businesses, because the rule expands the types of recycled hazardous secondary materials that will not be regulated as hazardous wastes under Subtitle C of RCRA, "while still maintaining protection of human health and the environment."<sup>445</sup> The Sierra Club, however, asserts that the rule's "exempt[ion] [of] billions more pounds of hazardous waste at thousands of

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<sup>439</sup> 2008 Preamble, *supra* note 34, at 64,681.

<sup>440</sup> *Id.* EPA has stated that releases of excluded hazardous secondary materials, which occur from a storage container unit which previously stored RCRA hazardous wastes, will be addressed as part of corrective action for all releases at the facility where the unit is located, under section 3008(h) and 7003, 42 U.S.C. §§ 6928(h), 6973 (2008). *Id.* at 64,717.

<sup>441</sup> 2008 Preamble, *supra* note 34, at 64,677, 64,681.

<sup>442</sup> *Id.* at 64,681.

<sup>443</sup> Sierra Club petition, *supra* note 359, at 7.

<sup>444</sup> 2008 Preamble, *supra* note 34, at 64,668.

<sup>445</sup> *Id.* at 64,684.

facilities from [RCRA] Part B permitting requirements will increase the risk of harm to health and the environment”<sup>446</sup> because

(1) facilities operating without RCRA permits, whether they do so illegally or because of prior exemptions, are far more likely to cause damage; (2) off-site hazardous recycling facilities constitute the great majority of the damage cases; ... (3) transfer facilities, or “middlemen,” represent another significant percentage of the contaminated sites . . . [; and (4)] the [new 2008] Rule frees facilities falling within all of the [preceding] categories to operate without RCRA permits . . . , [so] we can only expect the list of damage cases to grow substantially if EPA does not repeal the Rule.<sup>447</sup>

The Sierra Club further asserts that EPA’s claim—that the 2008 rules will have no net adverse environmental impact—is not supported by the administrative record and

rests on [the following] three unsupported and unsupportable assumptions . . . : (1) an unidentified “containment” standard will be as environmentally protective as detailed permit requirements, such as those set forth in RCRA Part B; (2) a self-regulatory regime will be as effective in preventing damage as oversight and enforcement proceedings; and (3) the threat of liability under RCRA or CERCLA will be enough to deter improper management of hazardous secondary materials, even though that threat was insufficient under the more rigorous regime that the Rule replaced.<sup>448</sup>

The Sierra Club consequently claims that the new 2008 rule is “a vague and unenforceable rule that arbitrarily and capriciously ignores the significant adverse impacts to health and the environment that will be caused by the Rule’s removal of fundamental RCRA protections.”<sup>449</sup>

If EPA Administrator Jackson does not vacate the 2008 final rule because of these criticisms, EPA should at least amend the rules in two significant respects. First, in order to prevent harm to the public and the environment from leakages and spills of hazardous secondary materials that are improperly stored or contained while awaiting recycling or reclamation, EPA should amend its 2008 final regulations to specify, to the extent feasible, design and performance standards for the storage and containerization of recycled and reclaimed hazardous secondary

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<sup>446</sup> Sierra Club petition, *supra* note 359, at 3.

<sup>447</sup> *Id.* at 4. The Sierra Club also argues in its petition that EPA’s new 2008 rule “ignores the . . . threat of abandonment of hazardous materials engendered by the recent collapse of domestic and international recycling markets” and that the new rule “. . . will increase the risk that hazardous materials collected by middlemen or recyclers will be abandoned when customers disappear.” *Id.*

<sup>448</sup> *Id.* at 7-8.

<sup>449</sup> *Id.* at 1.

materials, and the standards should be similar to the EPA regulatory requirements under Subtitle C of RCRA for storage of hazardous wastes. Second, because EPA has no authority to monitor, inspect or regulate recycling and reclamation facilities located in foreign countries, EPA should amend its 2008 regulations to provide that hazardous secondary materials recycled or reclaimed at a recycling or reclamation facility located in a foreign country cannot be excluded from regulation under Subtitle C of RCRA.