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WHO'S ON FIRST, WHAT'S ON SECOND, OR A DISCUSSION OF THE SCOPE AND POTENTIAL MISUSE OF THE "MIXTURE" AND "DERIVED- FROM" RULES AND "CONTAINED-IN" POLICY

by

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I. INTRODUCTION AND BACKGROUND

MOST of us are familiar with the famous Abbott and Costello skit referenced in this paper's title. In the skit, a peanut vender wants to learn the names of a baseball team and his request is met with a confusing response. The response is "Who's on first, What's on second, and I Don't Know is on third." What the vender does not know is that the team uses nicknames. A similarly confusing scenario confronts a party attempting to comprehend statutory and regulatory terms and concepts under the Resource Conservation and Recovery Act. Is the material a solid waste, a hazardous waste, and if so is it a listed hazardous waste or a characteristic waste? Or is it a media contaminated with hazardous constituents? The maze is even more complex when you add the "mixture" and "derived-from" rules to the plot. This Article discusses these terms and concepts, hopefully imparting a clearer understanding of the regulatory scheme than the hapless vender received in the comedy routine.

As an example, suppose that your client, X Company, generates a waste

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that the facility disposes of on-site. The waste in question has been listed by the U.S. Environmental Protection Agency (EPA) as a hazardous waste pursuant to federal regulations. The landfill containing the waste is located near a lake which empties into a river; the river then empties into the Gulf of Mexico. Now assume that a state agency acting pursuant to a delegation of authority from the EPA approaches the facility demanding closure of not only the disposal site but also all nearby soils, the adjacent lake, and part of the river, constituting hundreds of acres. The agency contends that X Company has caused the downstream waters to become hazardous waste under the "mixture" rule in that leachate from the disposal area, hazardous under the "derived-from" rule, enters and mixes with the lake and river.

Company studies, however, show that there are no detectable levels of the waste present in any of the areas but the actual landfill. In fact, studies show that because of the nature of the waste it is unlikely that the waste will leach from the landfilled areas. While perhaps your client should be at ease in that the agency has not demanded closure of the Gulf of Mexico and half of Louisiana, the agency has yet to explain the distinction between the river and the Gulf, contending nonetheless that the regulations give the agency tremendous power to encompass materials within the definition of "hazardous waste."

As this Article will point out, however, the mixture and derived-from rules are not necessarily applicable to all of the areas described in the above scenario. Rather, there are currently existing policies to address the situation and a proposed policy, a *de minimis* exception from the definition of hazardous waste, which could completely eliminate X Company's problems. Unfortunately, agencies and courts are not always consistent in their application or their understanding of the rules involved. This inconsistency may stem from lack of guidance from parties or the EPA, a lack of a technical understanding of the regulations and wastes, or merely imprecise analysis in an area turning on rather precise statutory and regulatory terms. Hopefully, this Article will help to eliminate some of those inconsistencies.

A. Overview of the Resource, Conservation, and Recovery Act

Congress passed the Resource, Conservation, and Recovery Act (RCRA)¹ in 1976 largely in response to the growing awareness of the past problems caused from the handling of hazardous waste and materials.² Midnight dumping, improper treatment, and lack of regulation had resulted in thousands of unregulated, leaking waste sites across the nation. The federal statute was intended to provide a "cradle to grave" regulatory scheme to track wastes from the point of generation to the point of disposal or treatment. The statute is forward-looking, however, in that it governs active and new facilities rather than abandoned or inactive sites.

To achieve the goals, RCRA imposes obligations on facilities that gener-

1. Congress amended the RCRA in 1984 by the Hazardous and Solid Waste Amendments, Pub. L. No. 98-616, 98 Stat. 3221 (1984).

2. 42 U.S.C. §§ 6901-6992k (1988).

ate, treat, store, or dispose of "hazardous waste." It also imposes certain obligations on facilities that generate, treat, store, or dispose of "solid waste."³ As a result, definitions are the key to the regulatory scheme under RCRA as under all environmental statutes. Accordingly, a discussion of the jurisdictional terms follows.

Before passing to the definitions, however, it is worth noting that many states have enacted the same or very similar laws and oversee the implementation of RCRA via these laws and delegation of authority from the EPA to the relevant state agency.⁴ Significantly, states are expressly empowered to adopt requirements more stringent than the federal standards.⁵ Thus, parties associated with hazardous waste must consider state laws and the differences, if any, from the federal rules discussed herein.⁶

3. Under the cradle to grave obligations imposed by RCRA, parties must comply with the applicable regulations if they produce, transport, treat, or dispose of a hazardous waste. For example, if the party is a "generator," defined as any person whose act or process produces a hazardous waste, the party must comply with the procedures set forth in 40 C.F.R. Part 262 (1989). Those who have a treatment, storage, or disposal facility (TSDF), such as a waste pile or landfill, must meet the obligations set forth in Part 264 (or Part 265) for owners or operators of TSDFs. Transporters must comply with Part 263.

A generator must first determine whether the material in question is a solid waste, and if so whether it is also a hazardous waste. *Id.* § 262.11. The generator must also obtain an EPA identification number and initiate the manifest for any transportation of the waste. The manifest, which is one of the keys to RCRA's cradle to grave system, names the generator, transporter, disposal facility, and type and amount of waste. If the generator does not receive a signed copy of the manifest back within 35 days, the generator must inquire into the status of the waste and file an exception report with the EPA which discloses the status of the missing waste and efforts taken to locate it. Thus, the manifest serves: (1) to provide a permanent written record of waste activity, and (2) to create an early warning system which permits prompt investigations if something in the process goes amiss. *See* 40 C.F.R. §§ 262.20, 262.42.

4. 42 U.S.C. § 6926 (1988).

5. *Id.* § 6929.

6. A brief mention of RCRA's enforcement tools could also prove useful. Under RCRA, owners and operators of hazardous waste TSDFs are liable for releases of hazardous waste beyond facility boundaries. 42 U.S.C. § 6924(v) (1988). The EPA may require a corrective action in such a situation when it is necessary to protect human health or the environment. *Id.* Additionally, the EPA or a state administering RCRA pursuant to authorized delegation from the EPA may issue administrative orders under § 6973 to "any person" who has "contributed or who is contributing to" the handling, storage, treatment, transportation, or disposal of hazardous waste which constitutes an imminent threat to health or the environment. *Id.* § 6973.

Further, the state Agency or EPA may issue compliance orders or seek an injunction to prevent violations or to restrain certain acts. Agencies also may suspend or revoke RCRA permits. *Id.* § 6928. Violators face potential civil penalties up to \$25,000 per day and/or criminal liability with fines up to \$50,000 for each day of a violation and/or imprisonment for up to two years for first offenses, which may double upon subsequent convictions. The offenses include knowingly transporting or causing to be transported hazardous waste to a non-permitted TSDF; knowingly treating, storing, or disposing of hazardous waste without a permit or in violation of a material condition of the permit; knowingly admitting or falsifying material, data, or statements on labels, manifests, records, reports, permits, or other documents; knowingly destroying, altering, concealing, or failing to file records; and knowingly exporting hazardous waste in violation of the law. *Id.* Additionally, violators face a potential fine of \$250,000 and/or imprisonment for up to fifteen years for persons, and a fine of \$1,000,000 for corporations, for knowingly storing, transporting, or disposing of hazardous waste with the knowledge that by so doing the party places another human being in imminent danger of death and/or serious bodily injury. *Id.* § 6928(e).

Finally, § 6972 of RCRA embodies another enforcement mechanism action. This section permits citizens to sue any person who is in violation of any standard or permit condition or

1. Jurisdiction Over Solid Waste

The first step in evaluating the applicability of federal or state solid and hazardous waste regulations to a particular material is to determine whether the material in question is a solid waste. Congress defined solid waste as "any garbage, refuse, sludge from a waste treatment plant, waste 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"⁷

The EPA promulgated regulations to implement RCRA and further defined solid waste. Although the current regulations are not final due to litigation,⁸ the proposed EPA definition of solid waste is "any discarded material that is not excluded by [other regulations]."⁹ Discarded material is defined as material that is inherently wastelike (for example, a routinely burned or incinerated material), abandoned, or recycled. Thus, the potential

who is contributing to improper treatment, storage, or disposal of solid or hazardous waste which presents an imminent and substantial endangerment to health or the environment. 42 U.S.C. § 6972 (1988). In *Hallstrom v. Tillamook County*, 110 S. Ct. 761 (1989), *reh'g denied*, 110 S. Ct. 761 (1990), the United States Supreme Court concluded that the notice provision of § 6972 is a mandatory prerequisite for a successful claim. *Id.* at 304, 308-09. Under the section, however, citizens may only obtain injunctions and court orders; no monetary relief is available.

7. 42 U.S.C. § 6903(27) (1988) (emphasis added).

8. See *American Mining Congress v. EPA*, 824 F.2d 1177, 1178 (D.C. Cir. 1987). In the original regulations, the EPA asserted authority over reclamation and recycling activities, which the parties alleged was beyond the jurisdiction of the Agency. The court agreed, focusing on the term "discarded" as defining what types of secondary material, such as material that may be recycled. *Id.* at 1178, 1185-87. Thus, the court remanded the regulations back to the Agency with the guidance that a material must be discarded. *Id.* at 1193. The EPA's subsequently promulgated regulations, however, continue to assert authority over certain reclamation and recycling activities. See 53 Fed. Reg. 519 (1988); 40 C.F.R. § 261.2(c)(3) (1989). Under the new regulations, the EPA defines a solid waste as reclaimed spent materials, listed sludges, listed by-products, and scrap metals. 40 C.F.R. § 261.2(c)(3) (1989).

Because the regulations continue to assert power over reclamation, the parties challenged the new proposal and also requested that the court hold the EPA in contempt for failing to observe the court's mandate. The court, however, denied the parties' requests concerning the proposals until the question is ripe for review, meaning when the regulations become final. See Order, *American Mining Congress*, No. 85-1206 (D.C. Cir. Aug. 31, 1988). Because the regulations are not yet final, the validity of the EPA's position remains unclear. At the present time, the EPA has not scheduled a date to issue the regulations in final form. (Telephone call to RCRA Hotline, 1-800-424-9346, on January 10, 1991).

The end result is that parties currently operate under a system of regulations whose major components, such as the definition of solid waste, the mixture rule, and the derived-from rule, as well as the listing rule itself, are not certain.

9. 40 C.F.R. § 261.2 (1989). In the 1980 preamble defining solid waste, the EPA adopted the position that any discarded material constituted a solid waste regardless of whether the party reused, recycled, reclaimed, or stored the material. 45 Fed. Reg. 33,079, 33,091 (1980). According to the EPA, waste destined to be reused, recycled, or reclaimed must be regulated as solid and hazardous waste; any other system would be unworkable and create a regulatory loophole by defining a material's hazardousness in terms of the party's intent regarding the waste. *Id.* at 33,091. Thus, the EPA would have no assurance that the materials would actually reach the reuse or recycling destination. *Id.* Finally, the EPA pointed out that such materials could constitute a hazard to health or the environment, such as waste solvent reclamation facilities with air pollution problems. *Id.*

scope of solid waste is broad and covers wastes of all forms of materials, including liquids, contrary to the common usage of the term solid.

2. Definition of Hazardous Waste

a. Application to Solid Wastes

After determining that the material in question is a solid waste, a party must next determine if the material is a hazardous waste. Congress defined hazardous waste as solid waste that because of its quantity, concentration, or physical, chemical, or infectious characteristics could cause or significantly contribute to increased mortality or serious illness or pose a substantial threat to health or the environment when *improperly* treated, stored, transported, or disposed of.¹⁰ Clearly, Congress contemplated a threat to human health.

Building on this definition, the EPA regulations cite four ways that a material may constitute a hazardous waste. First, the EPA may list a material as a hazardous waste.¹¹ Second, a material is a hazardous waste if it tests positive for one of the four hazardous characteristics: ignitability, corrosivity, EP toxicity or new Toxicity Characteristic Leaching Procedure (TCLP), or reactivity, a "characteristic" hazardous waste.¹² The third way a material may become a hazardous waste is under the mixture rule, which defines as hazardous any mixture of a hazardous waste and a solid waste.¹³ For listed wastes, the mixture rule is final; the party must treat the mixture as a hazardous waste or petition to have it delisted from the definition of hazardous waste.¹⁴ For characteristic wastes, the mixture rule is rebuttable; the party may test the material, show that the mixture does not exhibit any of the

10. 42 U.S.C. § 6903(5) (1988).

11. 40 C.F.R. § 261.3(a)(ii) (1989). The regulations specify the factors the EPA must consider in listing a waste as hazardous. See 40 C.F.R. § 261.11 (1989). These factors include the toxicity of the constituents, the concentration of the constituents, the potential for migration and bioaccumulation, and rate of degradation. *Id.*

12. *Id.* § 261.3(a)(i).

13. *Id.* § 261.3(a)(iii), (iv).

14. To delist the material in question from the definition of "hazardous waste," the applicant must show that the material does not meet any of the criteria for which the waste was listed and that the material does not exhibit any hazardous characteristic, such as corrosivity. 40 C.F.R. § 260.20 (1989). The applicant must also demonstrate that the waste is not capable of posing a substantial threat to health or the environment. As it does with most determinations, the EPA considers a worst case scenario, determining all possible exposure routes and transport mechanisms and using modeling to make the necessary predictions. *Id.* Thus, parties must make significant factual determinations and frequently continue to do periodic testing as a condition of delisting.

In determining whether to grant the delisting petition, the EPA will consider the nature of the constituent toxicity, the constituent concentration, the constituent potential to migrate when improperly managed, the persistence of the constituent, the degradation pattern of the constituent (for instance, whether the material becomes nonharmful or more harmful), the degree to which the constituent bioaccumulates in ecosystems, the types of improper management which could occur, the amounts of the waste on a regional and national basis, the nature and severity of human health and environmental problems which could occur or have occurred due to exposure to the constituent, and the actions taken by other governmental agencies based on the hazards posed by the constituent. *Id.*; 50 Fed. Reg. 28,742 (1985). For general guidance on the preparation of a delisting petition, see EPA Guidance Manual for Delisting Petitions, Doc. No. PB85-194488 (1985).

hazardous characteristics, and thus avoid regulation as a hazardous waste.¹⁵ Finally, a material may be a hazardous waste under the derived-from rule. Under this rule, any material from the treatment, storage, or disposal of a hazardous waste is a hazardous waste, except for precipitation runoff as from landfills.¹⁶ Leachate from storage of waste is an example of derived-from waste. As under the mixture rule, if the wastes involved were characteristic wastes, a party may avoid regulation by testing to show that the residue is not hazardous.¹⁷ If the wastes were listed wastes, however, parties may not escape liability except to petition the EPA for a delisting of the material from the definition of hazardous waste, a potentially costly and time-consuming procedure.¹⁸

In an apparent contradiction for a few listed wastes, however, parties may avoid the delisting process and yet have mixtures of listed wastes and other wastes exempt from regulation. If the waste was listed solely because it exhibited one or more of the characteristics for hazardous waste, a mixture of the waste and another solid waste can be tested to determine if the mixture still exhibits any characteristics of hazardous waste.¹⁹ If not, the party need not petition for a delisting of the mixture and may treat the waste accordingly. The contradiction results when trying to fit this exemption and that for characteristic waste mixtures with the general prohibition against listed waste mixtures.

i. Status of the Derived-From and Mixture Rules - The Shell Oil Case

Because of the questions discussed herein, such as whether EPA has jurisdiction over reclamation and the overbreadth of some EPA rules, parties immediately challenged the 1980 rules defining solid and hazardous wastes. One case, the *Shell Oil* case,²⁰ attacked in particular the mixture and derived-from rules. The case, however, has not concluded as yet. Thus, the validity of the rules remains at issue. The two major arguments in the case against the two rules are that: (1) the EPA exceeded its statutory authority in promulgating the regulations which use presumptions to find that a material is hazardous regardless of either the concentration of the constituents in question or the threat, if any, to human health or the environment,²¹ and (2)

15. See 40 C.F.R. § 261.3(a)(2)(iii), (d)(2) (1989).

16. *Id.* § 261.3(c)(2)(i).

17. *Id.*

18. Parties, however, have directly challenged the validity of the "derived-from" and "mixture" rules as discussed herein. *Chemical Waste Management, Inc. v. EPA*, 869 F.2d 1526, 1530 n.17 (D.C. Cir. 1989).

19. See 40 C.F.R. § 261.(a)(2)(iii) (1989); see also 46 Fed. Reg. 56,582, 56,588 (1981) (interim final rule adopting this approach).

20. See *Shell Oil v. EPA*, No. 80-1532 (D.C. Cir. 1989).

21. In *Shell Oil Co. v. EPA*, No. 80-1532 (D.C. Cir. 1980), the parties also allege that the EPA ignored its own regulatory factors for determining hazardousness, such as mobility, potential to degrade, and plausible types of improper disposal, in promulgating the two rules. Petitioners Brief for Review of Final Agency Action by the U.S. EPA, No. 80-1532, at 21 [hereinafter "Petitioners Brief"]; see also 40 C.F.R. § 261.11(a)(3) (1989) (criteria for listing hazardous waste).

the EPA violated the Administrative Procedure Act (APA) in promulgating the regulations by failing to follow the notice and comment procedures because the final version of the regulations allegedly differed substantially from the proposals.²² These arguments are discussed more fully below.

(A). *Statutory Criteria for Hazardous Waste*

Congress requires a material to constitute a substantial threat to health or the environment for the material to be a hazardous waste.²³ Under RCRA, the EPA must also consider certain factors relating to health in promulgating the regulations for identifying characteristic and listed wastes: toxicity, persistence, degradability in nature, potential for accumulation in tissue, flammability, corrosiveness, and other hazardous characteristics.²⁴ Accord-

22. Petitioners Brief, *infra* note 21, at 19-25, 27-33. The petitioners note, for example, that the discussions of both rules never refer to the congressional or EPA criteria. *Id.* at 29 n.20.

23. As briefly mentioned, the EPA offered no proof that the two rules will encompass only hazardous wastes, over which the EPA clearly has jurisdiction. Furthermore, the EPA did not rely on any statutory basis for the rules; instead, the EPA justified the rules through policy arguments. For example, the EPA reasoned that without the rules, parties would seek to avoid regulation by mixing hazardous wastes with solid wastes for dilution or would partially treat wastes. See Brief for Respondent, *Shell Oil Co. v. EPA*, No. 80-1532 (D.C. Cir. 1980), at 21-23 [hereinafter EPA Brief]. Contrary to EPA's allegations, however, the parties claim that the two rules undermine the policies of RCRA. For example, disposal facilities must accept materials which are not a threat to health, and thereby reduce the rapidly diminishing waste disposal capacity, and parties will have no incentive to treat wastes because residues remain hazardous if listed wastes were involved. The only escape is the lengthy and costly delisting procedure. Petitioners Brief, *supra* note 21, at 31, 37-40.

Specifically, the EPA's reasoning for the "mixture" rule was to prevent persons from avoiding regulation and to avoid administrative difficulties. The EPA stated that the "combinations of listed wastes and other wastes are infinite, thus making it too difficult to devise a workable regulatory program without the presumption of the mixture rule." 45 Fed. Reg. 33,095 (1980); see also EPA Brief at 22. Similarly, a justification for the derived-from rule was that it was too difficult to devise a waste-specific exclusion system identifying processes that would render non-hazardous wastes after treatment. 45 Fed. Reg. 33,096. According to the Petitioners in *Shell Oil*, the Agency "once again threw up its hands" rather than work through a problem. Petitioners Brief, *supra* note 21, at 34. The Petitioners argued that the EPA could have done then what it proposes now in the de minimis exception - enact specific concentration limitations for constituents below which materials, regardless of the origin, would not be hazardous, or enact a specific ban on mixing similar to the land ban prohibition on dilution. *Id.* at 34-35; see also 40 C.F.R. § 268.3 (1989) (dilution prohibited as a substitute for treatment). In fairness, however, the technology for developing such tests probably was not available in 1980. See 43 Fed. Reg. 58,950, 58,952 (1977); 45 Fed. Reg. 33,105 (1980). Even though, one must ask whether administrative complexities alone should ever be an acceptable justification.

Finally, the EPA excused the overbreadth of the rules by pointing to the potential for delisting. 45 Fed. Reg. 33,095 (1980). If the parties are correct that EPA was without the statutory power to act in the first instance, however, the Agency cannot excuse this lack of authority by adding a variance mechanism. Moreover, the limits on delisting such as expense, time, and informational requirements, indicate that if this mechanism was intended to be the relief valve, it is not particularly effective. See also EPA Brief, at 9, 21 (EPA stated that the mixture and derived-from rules "over-regulate," EPA justification for the overbreadth being the lack of time and information given the Agency in promulgating a definition of hazardous waste).

24. Another recent case supports the parties' arguments. In *Hazardous Waste Treatment Council v. EPA*, 861 F.2d 270 (D.C. Cir. 1988), the court held that the EPA could not consider factors not expressly listed in § 6921 of RCRA in determining whether used oil should be considered a hazardous waste. *Id.* at 275. Arguably, the policy justifications offered by EPA fall outside the list of specified factors as well.

ingly, the *Shell Oil* petitioners argue that the EPA's rules exceed its statutory authority delegated by Congress because the two rules sweep into RCRA substances which are not a hazard to health or the environment.²⁵

In addition to defining hazardous waste in terms of health, Congress also specified that the EPA had to develop hazardous waste criteria and apply these criteria to the materials in question.²⁶ The *Shell Oil* plaintiffs argue, however, that rather than observing the criteria the EPA adopted the two rules to create presumptions that materials would be hazardous, despite a lack of scientific proof in some cases that the materials subsequently encompassed as hazardous would indeed be hazardous. The plaintiffs contend that the EPA offered only the explanation that to do otherwise would be administratively difficult and that persons would seek to avoid regulation by diluting wastes by mixing or partial treatment.²⁷ Such reasons, as the plaintiffs argue, do not comport with the congressional mandate.²⁸

Finally, the plaintiffs note that at least under the contained-in policy, discussed below, media with no detectable level of constituent are excluded from the hazardous waste system, whereas the mixture and derived-from rules provide no such luxury.²⁹ As with the mixture and derived-from rules, however, there is no proof that the contained-in policy meets the congressional standards relating to hazardous waste.

Moreover, the plaintiffs allege that the EPA had no power to create the two rules as they currently exist because under the rules of administrative law, an agency may only act within the bounds of power delegated. Where Congress is clear, an agency has no discretion to act in a contrary manner or exceed the statutory delegation of power, and a reviewing court must look only to the congressional mandate.³⁰ Thus, the plaintiffs point out that under RCRA, the only two ways Congress established for a waste to be hazardous are to be identified or listed based on health-related criteria, neither of which necessarily applies to materials deemed by the EPA to be hazardous waste under the two rules. Because the congressional intent is clear, the parties aver that a court should not defer to the agency's interpretation.

(B). *Regulatory History of the Mixture and Derived-From Rules*

The first proposal by the EPA defining hazardous waste incorporated the congressional mandate for a threat to health by adopting in toto the congressional definition and including a simple procedure for having a material excluded from the definition of hazardous waste if testing showed that the

25. Petitioners Brief, *supra* note 21, at 8-9.

26. *Id.*

27. *Id.*

28. *Id.* at 38-39.

29. *Id.* at 26-27.

30. See *Chevron USA, Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984). *Id.* at 1539-40. The EPA indicated generic listings are acceptable because, even if done on a waste-by-waste basis, each facility's processes would produce varied wastes. Thus, the only alternative would be site-specific determinations. EPA Brief, *supra* note 23, at 43.

material did not exceed certain characteristic criteria or designated thresholds (an idea similar to the proposed *de minimis* exception now under consideration).³¹

The EPA originally included nine characteristics for hazardous waste: ignitability, corrosivity, reactivity, toxicity, radioactivity, infectiousness, phytotoxicity, teratogenicity, and mutagenicity.³² Because testing methods were not developed for all nine, however, the EPA proposed to use only the first four for identifying characteristic wastes but retained all nine for listing purposes.³³ The listing criteria posed by the agency were for generic classes of waste.³⁴ Originally, a waste would be listed if it possessed any of the characteristics or if the waste met the statutory definition of hazardous waste.³⁵ Some commenters, however, objected, asserting that the second prong of this "listing" test was too vague.³⁶ Deciding the system was unworkable, the agency adopted a list of hazardous constituents known to have toxic, mutagenic, teratogenic, or carcinogenic effects. If a constituent was present, the EPA determined that the waste would be listed as a hazardous waste.³⁷ The EPA did not establish trigger levels, however, meaning any amount of a constituent identified the waste as hazardous.³⁸

As originally proposed, the testing to show that a waste was non-hazardous was simple, requiring only that the material not exceed defined thresholds.³⁹ EPA proposed that treatment residues and by-products be tested the same as any waste to determine if the new waste exhibited one of the characteristics.⁴⁰ In addition, parties also had to determine whether a hazardous constituent was present. There was, therefore, no "derived-from" concept. In response to comments and to clarify multifaceted issues, however, the EPA adopted the current system, incorporating the mixture and derived-from rules.⁴¹ It also adopted the current delisting procedure, thereby modifying the proposed simpler procedure.⁴²

As noted herein, the EPA feared that without the mixture rule, generators would be encouraged to mix wastes to avoid regulation. Such avoidance could, in the agency's view, create a major regulatory loophole.⁴³ Further, the EPA noted that the infinite potential combination of listed wastes made

31. See 43 Fed. Reg. 33,066, 33,085, 58,955, 58,960 (1978).

32. *Id.* at 58,950.

33. *Id.*

34. *Id.* at 58,955.

35. *Id.* at 58,953, 58,955.

36. 45 Fed. Reg. 33,106, 33,117 (1980).

37. *Id.* at 33,107, 33,121.

38. See 40 C.F.R. Part 261 App. VIII (1989). The American Petroleum Institute argued the listing rule itself was not foreshadowed and that the new listing rule incorporating a list of constituents the presence of which creates a listed hazardous waste, is therefore void for lack of notice and comment. Brief for Petitioners American Petroleum Institute, et al., at 4-7, No. 80-1532, Shell Oil Co. v. EPA, (D.C. Cir. 1980) ["API Brief"].

39. 43 Fed. Reg. 58,959-60 (1978).

40. *Id.* at 58,991, 59,015; see also *infra* notes 47-49.

41. 45 Fed. Reg. 33,095, 33,120 (1980). The EPA adopted the exemption for mixtures of characteristic wastes later in 1981. See 46 Fed. Reg. 56,582, 56,588 (1981).

42. See 40 C.F.R. § 260.22 (1989).

43. 45 Fed. Reg. 33,095 (1980); EPA Brief, *supra* note 23, at 21-22.

a specific, rather than generic listing, impossible.⁴⁴ It is difficult to understand, however, why the EPA determined that there are more potential combinations for listed wastes than for characteristic wastes. The effect was to err on the side of caution. The EPA, however, arguably swung the pendulum too far and the system needs a more moderate approach.

Significantly, at the time of promulgation, the EPA recognized the potential overbreadth of the two rules. The EPA conceded that some substances under application of the rules did not pose a threat to health, as defined by Congress. For example, the EPA acknowledged that the application of the mixture and derived-from rules may create some inequities and include within the definition of hazardous waste some materials that have minute amounts of listed wastes present, if any.⁴⁵ The EPA also recognized that such material would not pose a threat to human health, and that the rules capture wastes that have ceased to pose a hazard.⁴⁶ To compensate the EPA stated that the relief valves were the delisting process or the segregation of wastes.⁴⁷

The agency's post-promulgation activities also demonstrated that the agency is aware of the continuing inequities of the application of the two rules. For example, EPA excluded from the mixture rule certain large-volume plant wastewaters that contain small quantities of hazardous wastes. The EPA noted that the "risk to human health and the environment from the management of these waste mixtures is not substantial, so that *automatically* defining these waste mixtures as hazardous is inappropriate."⁴⁸

Ultimately, therefore, on the basis of the agency's own policy arguments and recognition of the current problems, the agency should acknowledge that contaminated media is not hazardous waste. Therefore, the closure of X Company's hypothetical disposal site, lake, and the river, should not be

44. 45 Fed. Reg. 33,095, 33,096 (1980).

45. See 45 Fed. Reg. 33,095 (1980); EPA Brief, *supra* note 23, at 21. A solid waste is defined as any discarded material or material which is abandoned, recycled, or inherently wastelike. 40 C.F.R. § 261.2; see also *supra* text at 6-8. As noted, the problems eventually led the EPA to exclude some mixtures of listed hazardous wastes and wastewaters from the presumption of hazardousness created by the mixture rule. See 40 C.F.R. § 261.3(a)(2)(iv) (1989).

46. 46 Fed. Reg. 56,582 (1981); see also 45 Fed. Reg. 33,095-96 (1980). See Jorling Letter, *infra* note 62. Further, in the March 29, 1990, final rule adopting the new TCLP, the EPA again acknowledged the overbreadth of the mixture and derived-from rules and stated, therefore, that the EPA is considering the self-implementing de minimis exception. 55 Fed. Reg. 11,832 (1990). The EPA recognizes that the proposal to create the de minimis exception to the definition of hazardous waste is especially necessary in view of the increasing burden on industries as the land ban regulations take effect. *Id.*

47. 45 Fed. Reg. 33,095 (1980); EPA Brief, *supra* note 23, at 48-49. For a discussion of the delisting process and the inherent problems, such as modeling or risk assessment, see Florini, Denison, & Rathbun, *EPA's Delisting Program for Hazardous Wastes: Current Limitations and Future Directions*, 19 ENVTL. L. REP. 10,558 (1989). The article, however, argues that the delisting process is not stringent enough.

48. 46 Fed. Reg. 56,582 (1981) (codified in 40 C.F.R. § 261.3(a)(2)(iv) (1989)) (emphasis added); see also Memorandum from John Skinner, Director, Office of Solid Waste, to Hazardous Waste Division Directors, "Clarification of Policy on Hazardous Waste Derived-from Mixture of Leachate and Precipitation Run-off at Landfills, Waste Piles and Land Treatment Units" (Nov. 14, 1984) (acknowledging need for a de minimis exception) [hereinafter "Skinner Memo"].

necessary based on the presumed facts. The company would not be attempting to evade the law by the dilution of wastes. Further, its testing and risk analysis on the materials indicate that the media would pose no threat to health. Such testing would also show that the party acted in good faith. Finally, in the reality of limited resources and personnel, an agency's efforts arguably would be more wisely directed at situations where risk analysis shows a clear danger to health. Moreover, RCRA's legislative intent was concerned with protecting the public health and the environment based on a *substantial* threat to the same. In situations like that of X company, these objectives are not jeopardized by leaving the lake and river as they are.

(C). *Policy Considerations and Arguments*

As pointed out in *Shell Oil*, if applied literally, the mixture and derived-from rules (and arguably the contained-in policy) have no bounds in that a single drop of a listed hazardous waste falling into a tank containing non-hazardous wastewater of any size creates a tank full of listed hazardous waste.⁴⁹ Obviously, there must be some form of relief from such an overbroad definition. The EPA, however, acknowledged no relief except the delisting procedure. If the delisting procedure was meant to provide relief, however, the *Shell Oil* plaintiffs assert that it is not meaningful relief because delisting procedures are expensive and time-consuming. Further, the delisting process is done on a site-specific, waste-specific basis. Therefore, parties similarly situated may not be subject to the same set of rules.

The extreme reach of the two rules is also obvious if treatment of waste is considered. A party could treat a listed hazardous waste until the treated material contained none of the hazardous constituent in question. Under the derived-from rule, however, the residue is, and remains, a listed hazardous waste unless a delisting petition is granted.⁵⁰ Thus, the inflexible rule is arguably counterproductive to the RCRA goal of waste minimization and treatment because there would be no incentive to treat.⁵¹

(D). *Notice and Comment Errors*

The *Shell Oil* plaintiffs also allege that the EPA failed to observe requirements established in the APA for notice and comment. The parties alleged error because the proposed rules differ significantly from the final version adopted.⁵² Thus, the plaintiffs claimed that they were deprived of an oppor-

49. Petitioners Brief, *supra* note 21, at 16. As the petitioners also note, a small amount of incinerator ash from incineration of several wastes, including one listed waste, in one small drum placed in a landfill with a leachate collection system, makes *all* the leachate a listed hazardous waste. *Id.* at 8-9.

50. *Id.* at 17. In fact, the *Shell Oil* parties point out that this conflicts with the definition of "treatment" under RCRA which recognizes that some forms of treatment are effective to render a material nonhazardous. *Id.* at 20; see also 42 U.S.C. § 6903(24).

51. Petitioners Brief, *supra* note 21, at 38-39. For example, the *Shell Oil* Petitioners point out that the EPA had to delay the effective date of the land ban regulations because of a lack of disposal capacity. Petitioners Brief, *supra* note 21, at 38 n.28; see also 54 Fed. Reg. 26,636 (1989).

52. See Petitioners Brief, *supra* note 21, at 27-31, 40-46.

tunity to comment, and that they had no notice of the content of the final regulations. Accordingly, the plaintiffs allege that the rules should not be applied because they are invalid.

To understand their arguments, one must first examine the general rules applicable to agencies in notice and comment situations.⁵³ According to one court:

53. Notice and comment are required to satisfy due process requirements. *Bell Lines, Inc. v. United States*, 263 F. Supp. 40, 46 (D.W.Va. 1967). Accordingly, if an agency fails to follow proper notice and comment rules, an action is invalid. *A.O. Smith Corp. v. FTC*, 396 F. Supp. 1108, 1124 (D. Del. 1975), *aff'd in part, vacated in part on other grounds*, 530 F.2d 515 (3d Cir. 1976). Additionally, on review courts must scrutinize procedural errors in order to serve the purposes of notice and comment. *BASF Wyandotte Corp. v. Costle*, 598 F.2d 637, 641 (1st Cir. 1979), *cert. denied*, 444 U.S. 1096 (1980).

Under certain circumstances, an agency does not have to repropose a rule despite changes between the draft and final versions. The test is whether the final rule is a logical outgrowth of the proposals, even if the changes are significant. *See Haralson v. Federal Home Loan Bank Bd.*, 678 F. Supp. 925, 927-28 (D.D.C. 1987) (no lack of notice where changes are largely procedural and are logical outgrowth of original); *Spartan Radiocasting Co. v. FCC*, 619 F.2d 314, 321 (4th Cir. 1980) (a new opportunity for comment does not arise simply because a final rule differs, in part, due to comments); *American Iron & Steel Inst. v. EPA*, 568 F.2d 284, 293-95 (3d Cir. 1977) (advance notice sufficient to apprise interested persons of considerations of more stringent applications). Thus, no new comment period is required unless the changes are significant and are *not* a logical outgrowth or, according to one court, so major that the original notice did not adequately frame the subjects and issues. *Air Transp. Ass'n of Am. v. CAB*, 732 F.2d 219, 224 (D.C. Cir. 1984); *see also NDRC v. EPA*, 824 F.2d 1258, 1283-84 (1st Cir. 1987) (the court noted the Agency provided notice in the preamble).

In *South Terminal Corp. v. EPA*, 504 F.2d 646 (1st Cir. 1974), the court held that substantial differences between a transportation plan draft and final form did not deprive the parties of notice and opportunity to comment where the parties had a warning, especially if strategy changes were foreshadowed in the original plan. *Id.* at 656-57. The notice also invited comments on other alternatives, and expressly noted that the final rule in response to such comments might differ substantially. *Id.* at 657. The *South Terminal* court noted that although the information was never requested, the record was available at all times to the parties, who never requested the information. *Id.* at 658 n.12. Finally, the court noted that changes would be expected and are inherent in the comment process. Thus, as long as the parties received notice and the final result constituted a logical outgrowth, no second comment period was mandated. *Id.* at 659. The specific alternatives in *South Terminal*, however, were generally known, irrespective of the degree or specifics that were finally adopted.

On the other hand, however, agencies may improperly fail to provide notice when the final rule substantially changes without forewarning. *See American Standard, Inc. v. United States*, 602 F.2d 256, 267-69 (Ct. Cl. 1979); *American Medical Ass'n v. United States*, 668 F. Supp. 1085, 1104-06 (N.D. Ill. 1987) (final rule going from seven factors with flexible approach to three factors and specific method is substantial change, thus violating notice and comment rules). Similarly, where a proposal indicates that the Agency will continue to use established criteria, but the final rule rejects the criteria, the Agency action deprives the parties of the right to comment. *National Black Media Coalition v. FCC*, 791 F.2d 1016, 1022 (2d Cir. 1986). In *National Black Media Coalition*, the court rejected the Agency argument that, because the notice invited other alternatives, the parties should have foreseen that the Agency would reject a longstanding use of criteria. *Id.* In *Weyerhaeuser v. Costle*, 590 F.2d 1011 (D.C. Cir. 1978), the court held that where the Agency based a waste load calculation on an inaccurate number, corrected before the final rule without comment, and provided no explanation of the change, the rules were invalid because the Agency offered no explanation or opportunity to comment. *Id.* at 1029-30. In *United Church Bd. For World Ministries v. SEC*, 617 F. Supp. 837 (D.D.C. 1985), the Agency failed to specify the percentages for a voting procedure, noting only that the procedure would be changed and asking for comments on the possibilities. *Id.* at 838. The court asserted that specific comments should be the given when producing a record. *Id.* at 840 ("manner of compiling [the] record . . . must allow for concrete criticisms and comments"). Thus, the lack of specificity and a suggestion that the Agency had previously formed its opinion based on undisclosed data led to the court's invalidation of the regulation.

The essential inquiry is whether the commenters have had a fair opportunity to present their view on the contents of the final plan. We must be satisfied, in other words, that given a new opportunity to comment, commenters would not have their first occasion to offer new and different criticisms which the Agency might find convincing. Thus, where the final rules "are a result of a complex mix of controversial and un-commented upon data and calculations," remand may be in order. *Similarly where the Agency adds a new pollution control parameter without giving notice of intention to do so or receiving comments, there must be a remand to allow public comment.*⁵⁴

Based on these cases, the *Shell Oil* plaintiffs arguably have a good case for lack of notice of the mixture and derived-from rules.⁵⁵ The original proposal defining hazardous waste made no reference, or at best a vague reference, to the mixture and derived-from rules. As to the contained-in policy, there is a stronger argument on this point as indicated by the *Chemical Waste Management* court.⁵⁶

b. Application to Contaminated Media

Under the EPA's most recent interpretation, the mixture and derived-from rules do not apply to contaminated media, such as surface water, groundwater, or soil, because these materials are not solid wastes.⁵⁷ Instead the contained-in policy, which appears to be an outgrowth of the two rules, applies to such media.

This result is predicated on the definitions of solid and hazardous waste. According to the express regulatory language in the definition of hazardous waste promulgated by the EPA and adopted through reference by some states, such as Texas via the Texas Water Commission,⁵⁸ the mixture rule defines as hazardous "a mixture of a *solid waste and one or more hazardous*

54. *NRDC v. EPA*, 824 F.2d 1258, 1283 (1st Cir. 1987) (emphasis in original) (citing *BASF Wyandotte Corp. v. Costle*, 598 F.2d 637, 642 (1st Cir. 1979), *cert. denied*, 444 U.S. 1096 (1980)). In the *NRDC* case, the court held that EPA failed to provide sufficient notice about a separate groundwater protection rule, finding the EPA never mentioned the rule in its proposals. See also *American Frozen Food Inst. v. Train*, 539 F.2d 107, 135 (D.C. Cir. 1976) (EPA addition of pollutant to list in effluent limitations for industry held invalid because notice, proposals, and development document only referred to different pollutants, meaning there was no opportunity to comment).

55. For example, at one point in the final rule, EPA notes that the mixture and derived-from rules are "a new provision which does not have a direct counterpart in the proposed regulation." 45 Fed. Reg. 33,095 (1980).

56. *Chemical Waste Management, Inc. v. U.S. E.P.A.*, 869 F.2d 1526, 1537-38 (D.C. Cir. 1989); see *infra* notes 74-76.

57. Parties also attacked the validity of the "listing" rule itself using the same arguments. See API Brief, *supra* note 38 at 4-7. The contained-in policy is a very recent arrival, and all relevant EPA memorandum and guidance are not clear. Thus, parties must be alert to the basis of an Agency assertion or document to counter it properly. Also, parties must be aware that regulatory terms have very specific meanings.

For example, some old guidance indicates that precipitation runoff (rainwater) mixed with a listed hazardous waste becomes a hazardous waste even though precipitation runoff is arguably not a solid waste. See Skinner Memo, *supra* note 48. EPA defines "runoff" as "rainwater, leachate, or other liquid that drains over land from any part of a facility." 40 C.F.R. § 260.10 (1989).

58. 31 TEX. ADMIN. CODE § 335.1 (1989).

wastes listed" by the EPA.⁵⁹ Similarly, the derived-from rule also requires the presence of at least two wastes by stating that "any *solid waste* generated from the treatment, storage, or disposal of a hazardous waste, including . . . any leachate (but not including precipitation run-off)" is hazardous.⁶⁰ Thus, from the definitions the EPA contemplated the presence of two wastes when it devised the two rules.

The requirement for two wastes is precisely why the mixture and derived-from rules are not, and should not be, applicable to contaminated media as recognized by the EPA. According to the definition of solid waste and case law interpretations of the same, contaminated environmental media such as soil, groundwater, or surface water, are not solid wastes.⁶¹ The EPA has stated that the mixture and the derived-from rules do not pertain to contaminated environmental media because the rules require the presence of a solid waste and the media are not within the definition of solid waste.⁶²

Thus, the EPA developed a specific policy which applies to contaminated environmental media, called the contained-in policy.⁶³ Under the contained-in policy, a party must handle and treat contaminated media as hazardous waste because of the waste contained in the media.⁶⁴ However, the EPA provides no statutory or regulatory support for this assertion. Because contaminated media must be handled as a hazardous waste, the result appears to be the same as under the mixture rule, meaning entire fields containing only minute amounts of waste could be subject to hazardous waste management requirements, including the land ban prohibition. This multiplies cleanup costs at Superfund or other sites and for RCRA corrective action

59. 40 C.F.R. § 261.3(a)(2)(iv) (1989) (emphasis added).

60. *Id.* § 261.3(c)(2)(i) (emphasis added).

61. *See* 42 U.S.C. § 6903(5) (1988).

62. *See* Letter from Jonathan Cannon, Acting Assistant Administrator, to Thomas Jorling, June 19, 1989 (establishing the contained-in policy) [hereinafter Jorling Letter]. Under the contained-in policy, EPA contends that any environmental media contaminated with a hazardous waste is a hazardous waste in an application similar to that of the mixture rule. *See* 40 C.F.R. § 261.3(a)(2)(iii), (iv) (1989); 53 Fed. Reg. 31,142 (1988).

63. *See also* Jorling Letter, *infra* note 62, at 1. In the letter, Jorling states that one scenario for the contaminated media would require delisting based on the mixture or derived-from rules.

However, these two rules do not pertain to contaminated environmental media. Under our regulations, contaminated media are not considered solid wastes in the sense of being abandoned, recycled, or inherently waste-like as those terms are defined in the regulations. Therefore, contaminated environmental media cannot be considered a hazardous waste via the "mixture" rule Similarly, the "derived-from" rule does not apply to contaminated media.

Id. at 1.

64. Such a conclusion should not be surprising based on other EPA discussions. In 1982, EPA concluded that landfills with only one waste, monofills, should be regulated less strictly than other landfills. 47 Fed. Reg. 32,281 (1982). For example, EPA noted as to K061 monofills that "[u]nder management conditions that preclude contact between [K061] and acids, EPA believes that there may be an *extremely low* likelihood that significant concentrations of hazardous constituents could leach into nearby groundwaters." *Id.* Furthermore, the current delisting policy and proposed de minimis exception, discussed below, support such an argument. For example, EPA stated in the delisting procedure preamble that if the party could demonstrate that no detectable levels of toxic constituents, then they could delist the waste. 45 Fed. Reg. 33,077 (1980).

cleanups.⁶⁵ It also generates large volumes of otherwise harmless "hazardous" waste, which occupies much-needed space in Subtitle C facilities.⁶⁶

The EPA moderated the potential effect of the contained-in policy, however, by permitting the use of a risk assessment approach on a case-specific basis to evaluate the material and need to treat or remediate.⁶⁷ Further, the EPA (or the authorized state) will determine on a case-by-case basis what level of cleanup is necessary for the contaminated materials to be considered non-hazardous.⁶⁸ Arguably, therefore, if testing proves no detectable levels of the waste, even a listed waste, in the media, parties should not have to handle the media as waste and thus close the affected area. Treatment should not be necessary because the waste does not pose a threat to health. Moreover, treatment for treatment's sake is not an efficient use of resources and should not be required. Unfortunately, none of the guidance documents address such a scenario, but rather assume treatment is necessary.⁶⁹ Moreover, this approach suffers from a lack of predictability and fairness to parties similarly situated.

The EPA also has several guidance directives adopting or explaining the contained-in policy for contaminated media.⁷⁰ For example, in one document the EPA states that groundwater contaminated with a listed hazardous

65. The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 6901-6992k (1988) (called CERCLA or Superfund).

66. A Subtitle C facility includes "any facility for the collection, source processing, storage, transportation, transfer, processing, treatment or disposal of solid wastes, including hazardous wastes, whether such facility is associated with facilities generating such wastes or otherwise." 42 U.S.C. § 6903(29)(C) (1988).

67. Jorling Letter, *supra* note 62, at 2; Memorandum from Sylvia K. Lowrance to Jeff Zelikson, "Status of Contaminated Groundwater and Limitations on Disposal and Reuse" (Jan. 24, 1989) [hereinafter Lowrance Memo].

68. Jorling Letter, *supra* note 62, at 2.

69. The EPA has issued guidance directives adopting the contained-in policy for contaminated media. See Memorandum from Marcia E. Williams, Director, Office of Solid Waste to David Stringham, "Regulatory Interpretation with Respect to Leaks, Spills, and Illegal Discharges of Listed Wastes to Surface Waters" (Jan. 23, 1986). Although Williams does not use the term "contained-in," the policy conclusion is somewhat the same. In other words, tributaries and sediments of a harbor are not hazardous waste under application of the mixture rule because the media are not solid wastes. As the memo notes, EPA "would not normally consider sediments in rivers as wastes." *Id.* The memorandum concludes, however, that the remedial action necessary will depend on whether illegal disposal under RCRA occurs or whether the discharges originate from a point source regulated under the Clean Water Act, 33 U.S.C. §§ 1251-1381 (1988). See also Memorandum from Jeffery D. Denit, Acting Director, Office of Solid Waste, to Sam Becker, Chief Hazardous Waste Compliance Branch, "Refractory Wastes at U.S. EPA Combustion Research Facility" (Mar. 11, 1988) (soils contaminated with dioxin must be treated as hazardous waste as long as they contain any of the waste; after treatment, formal delisting is not necessary); Memorandum from Marcia E. Williams, Director, Office of Solid Waste, to Patrick Toban, Director, Waste Management Division Region IV, "RCRA Regulatory Status of Contaminated Groundwater" (Nov. 13, 1986) (groundwater contaminated with leachate is not hazardous waste via mixture rule because the media is not solid waste but must be handled as such a waste until treatment shows it no longer contains the waste); Lowrance Memo, *supra* note 67 (contaminated groundwater must be handled as waste due to waste contained in it until treatment shows waste is no longer present and then groundwater may be used beneficially); 53 Fed. Reg. 15,578, 15,586 (1988) (discussing the contained-in policy in the land ban context).

70. See *supra* note 69.

waste⁷¹ does not have to be treated as a hazardous waste if, after treatment, the water no longer contains the listed hazardous waste.⁷² Significantly and in marked contrast to the mixture and derived-from rules, the EPA does not require the party to go through the delisting process to avoid regulation, despite the fact the water contained a *listed* hazardous waste.⁷³ Accordingly, in the hypothetical, X Company should be able to argue that because testing indicates no detectable waste in the soils, lakes, or river, the contained-in policy provides a basis for an argument that the water and soils do not even have to be treated.

There is also a case that supports the EPA position that contaminated environmental media are not solid wastes, and thus are technically not within the scope of the mixture and derived-from rules.⁷⁴ In *Chemical Waste Management, Inc. v. EPA*,⁷⁵ the plaintiffs challenged the land ban treatment standards as they apply to media contaminated with hazardous waste. The federal appellate court ultimately upheld the application of the land ban treatment standards to contaminated media out of deference to the EPA interpretation of its regulations and a finding of a specific congressional acknowledgment in the land ban context that media could be subject to the restrictions.⁷⁶ The court, however, expressly rejected the contention that the

71. For example, in one document EPA discusses the application of the mixture rule to contaminated groundwater, specifically groundwater contaminated with a listed hazardous waste. See OSWER 9481.00-6, RCRA Regulatory Status of Contaminated Groundwater. According to EPA, the groundwater in question must be treated as if it is a hazardous waste during its treatment, storage, or disposal. The basis cited by EPA for the conclusion is not the mixture rule, however, which the Agency expressly disavows because groundwater is not a solid waste, but the fact the water contains a listed hazardous waste. *Id.*

72. *Id.*

73. *Id.*

74. *Chemical Waste Management, Inc. v. U.S. E.P.A.*, 869 F.2d at 1539. Significantly, the court rejected the EPA argument that the new policy mandating that contaminated media be considered hazardous waste was part of the original 1980 regulations defining hazardous waste. *Id.* at 1538. As the court noted:

We do not believe, however, that the 1980 rules clearly provided that contaminated environmental media would be considered hazardous wastes. Neither the mixture nor the derived-from rule is by its terms directly applicable to contaminated soil or groundwater. No other portion of the rules plainly applies, and the preamble issued by the Agency at that time does not explicitly address the question.

Id. (footnote omitted). In the footnote, the court notes that both the mixture and derived-from rules require the presence of a solid waste, stating: "For either of these rules to apply directly, soil or groundwater would have to be considered a solid waste. This does not match the statutory definition: 'The term 'solid waste' means any garbage, refuse, sludge . . . and other discarded material.'" *Id.* at 1538 n.14.

75. 869 F.2d at 1196.

76. The court referred to the EPA policy on contaminated media as the contaminated soil rule and expressly noted that the Agency did not contend that the policy was a new regulation, that the pros or cons of the policy were considered, or that notice and comments rules were met. *Chemical Waste Management, Inc. v. U.S. E.P.A.*, 869 F.2d 1526, 1537 (D.C. Cir. 1989). Ultimately, the court viewed the interpretation by EPA that parties must treat contaminated media as hazardous waste in the land ban context as part of a complete system of regulations which was reasonable and consistent in its approach. *Id.* at 1539-40. The court also noted, however, that in the past the Agency had successfully applied the policy in other contexts, for example in delisting petitions for contaminated medias. *Id.* at 1540. According to the court:

We recognize that the acquiescence of particular companies does not signal the

mixture and derived-from rules apply to contaminated media because the media are not solid waste, the same reason cited by the EPA.⁷⁷ Moreover, the *Chemical Waste Management* court noted that the validity of its decision hinged on the validity of the mixture and derived-from rules, which is currently being litigated.⁷⁸

As noted, however, the EPA failed to cite any authority for the contained-in policy.⁷⁹ The *Chemical Waste Management* court also clearly indicated that the policy was not articulated in the 1980 preamble, and that the EPA had not necessarily debated the pros and cons of the policy.⁸⁰ Thus, the contained-in policy may be vulnerable to attack. Furthermore, the policy appears to set substantive standards for contaminated media, yet the policy only appears in memorandum.⁸¹ The EPA has, therefore, arguably avoided the requisite notice and comments procedures. Nonetheless, the policy is a step forward in that if treatment completely removes a waste, parties do not have to treat the media as hazardous waste and thus avoid the more formal and lengthy delisting process for listed hazardous waste mixtures. The remaining question is what action an agency will require if testing shows no risk to health or the environment but nonetheless shows some minute level of constituent present.

It should also be noted that although many states have adopted the mixture and derived-from rules in their regulations defining hazardous waste, most have probably not adopted the "contained-in" policy. Therefore, there may be a strong argument that such states are without authority to regulate contaminated media.

acquiescence of the entire industry, nor do we suggest that the Petitioners are somehow barred from contesting this interpretation simply because it has been applied to others in the past. We nevertheless believe that, when we assess the reasonableness of the EPA's interpretation of its own rule, the consistency with which that interpretation has been applied in the past weighs in favor of the Agency.

Id. While consistency is a good thing, the court arguably should not have considered this factor at all, especially since the court also noted that the policy has not been through the notice and comment process and that the Agency did not consider the pros and cons of the policy. The court further stated that some of the delisting petitions were made *under protest*. *Id.* at 1540 n.18. To this observer, it is no less wrong to apply an incorrect policy across the board than to apply it inconsistently.

77. See *supra* note 74, 76.

78. See *Shell Oil v. EPA*, No. 80-1532 (D.C. Cir.) (challenging the two rules; case still pending). This is not to say that other courts or administrative judges have always used the correct terminology or policy when issuing decisions, leading to the confusion suggested by the title of this article. See *In re Commonwealth Oil Refining Co.*, 1987 RCRA LEXIS 27 (Aug. 13, 1987), *aff'd*, 1989 RCRA LEXIS 15 (Sept. 15, 1989) (administrative law opinion). In this case, the court held that because of the mixture rule, downstream treatment lagoons which received wastewater mixed with a listed hazardous waste during the processes were regulated units under RCRA and that the water therein was hazardous. However, in one respect the case can be distinguished so as not to contradict EPA's contained-in policy. There was a solid waste to mix with the listed hazardous waste — the remaining wastewater. However, this does not address the issue of the waste/surface water mixture and it is arguably incorrect to refer to the lagoons as hazardous waste.

79. Jorling Letter, *supra* note 62, at 2.

80. See *supra* notes 73-76.

81. *Id.*

II. THE DE MINIMIS PROPOSAL - FORM OUT OF CHAOS?

The EPA currently is in the process of promulgating a new policy, the de minimis exception from the definition of hazardous waste, which specifically addresses contaminated media.⁸² The current EPA draft for the de minimis exception addresses listed hazardous waste mixtures, derivations, and contaminated media.⁸³ The EPA candidly recognizes that the current system for managing listed waste could be handled more effectively.⁸⁴ The goals of the de minimis programs are to implement a concentration-based system for hazardous waste identification, expedite the exemption of low concentration, low risk waste currently captured by the derived-from, mixture, and contained-in rules, and promulgate baseline levels for potential application in programs such as clean closure and corrective action.⁸⁵

The draft proposal adopts concentration-based health/exposure standards below which a material will not be considered hazardous.⁸⁶ If a constituent's health-based exposure limit is below the quantitation level, the EPA plans to use practical quantitation limits or PQLs, below which the material would not be considered hazardous. As the proposal currently reads, the system will be self-implementing. In other words, if the party performs the necessary testing and submits the results to the agency, no formal agency action is necessary. Thus, the agency has implicitly recognized that the current delisting process is too cumbersome and inefficient.

To qualify for the de minimis exception, the party would need to collect representative samples and run analyses for 180 toxicants. The results must

82. See 52 Fed. Reg. 40,844, 40,884 (1987); 54 Fed. Reg. 17,295 (1989); Lowrance Memo, *supra* note 67, at 1-2. As the cites indicate, the EPA has been promising the arrival of the exception for several years. See also Jorling Letter, *supra* note 62:

The Agency is currently involved in a rulemaking effort directed at setting *de minimis* levels for hazardous constituents below which eligible listed wastes, treatment residuals from those wastes, and environmental media contaminated within those listed wastes would no longer have to be managed as hazardous wastes. The approach being contemplated in the *De Minimis* program would be similar to that used in the proposed RCRA Clean Closure Guidance in terms of the exposure scenario (direct ingestion), the management scenario (not in a waste management unit), and the levels (primarily health-based).

Id. at 2.

83. Jorling Letter, *supra* note 62, at 2; 55 Fed. Reg. 11,832 (1990).

84. See Outline of De Minimis from Al Collins, EPA, from Keystone Conference [hereinafter *De Minimis Outline*]; see also 55 Fed. Reg. 11,832 (1990) (TCLP regulations discussing mixture and derived-from rules and describing planned de minimis exception). See *supra* note 14. EPA arguably foreshadowed the policy in the original preambles adopting the mixture and derived-from rules. The EPA noted then that other options were considered, such as enacting specific concentrations for constituents below which waste would be nonhazardous, but that *at the time* the technology was not available. See *supra* note 68.

85. *De Minimis Outline*, *supra* note 84, at 1.

86. For process waste, the generator must be able to show that the process waste meets the applicable land ban disposal restriction treatment standards. *De Minimis Outline*, *supra* note 84, at 2. If the waste fails this first test, the party must treat the waste until it meets the standard. If the waste meets the land ban standards, the generator can apply for an exemption by analyzing the waste using Method 1311 or the TCLP for the 180 toxicants. *Id.* EPA also adopted a risk-based methodology in the land ban context. At one time the EPA proposed using a risk-based methodology to characterize waste as hazardous for purposes of the land ban regulations. See 51 Fed. Reg. 40,572, 40,578 (1986).

be lower than solid ingestion health-based numbers for solids and for liquids below the water ingestion health-based numbers.⁸⁷ Additionally, the party must submit to the EPA testing documentation and a certification.⁸⁸ In this respect, the de minimis proposal arguably goes too far. It should not be necessary to test for toxicants that were never a concern for a particular waste. Rather, this Article suggests that the waste generator should only be required to test for the constituents of concern — those for which the waste was originally listed. In fact, in the original proposals defining hazardous waste, parties desiring to delist only had to test for the characteristics or properties which caused the waste to be listed.⁸⁹ The EPA, however, states in the strawman policy that it plans to request comments on this issue.⁹⁰

More significantly, the EPA is proposing to treat contaminated media, such as soil and water, differently from process wastes or mixtures.⁹¹ Again, as with process wastes, the media must meet the land ban treatment standards.⁹² Next, the party must test both leachate⁹³ and the media for the presence of the 180 toxicants. For contaminated media, the EPA proposes to use a health-based number or HBN derived from the maximum contaminant levels from the Safe Drinking Water Act,⁹⁴ reference doses, and risk specific doses. If the media contains waste below these levels, the media will be exempt from RCRA regulation without affirmative agency review, and the party may *leave the media in place with no further regulatory control*.⁹⁵

If, on the other hand, the media contains constituents at levels of concern, the party has an option: (1) test the media using the 1311 TCLP procedure, or (2) treat the waste to below the relevant level.⁹⁶ If the party uses the TCLP test and the results indicate that the levels are below the levels set for process wastes under the de minimis exception, the media will be considered nonhazardous.⁹⁷ On the other hand, if the analysis shows that the levels are above the de minimis levels for processed wastes, the party must treat the media as hazardous waste or treat the media to below the relevant level.⁹⁸

87. *Id.*

88. *Id.* at 1-2.

89. See 43 Fed. Reg. 58,959-60 (1978). The EPA plans to request comment on this issue in the strawman policy. See De Minimis Outline, *supra* note 84, at 8.

90. De Minimis Outline, *supra* note 73, at 8.

91. The District of Columbia Court of Appeals recently upheld the EPA's authority to require treatment of contaminated media in the land ban context by finding a specific congressional intent that media be addressed in this context. The court nevertheless clearly pointed out, as noted above, that the media are not hazardous under application of the mixture or derived-from rule because the media are not solid wastes. See *Chemical Waste Management, Inc. v. U.S. E.P.A.*, 869 F.2d 1526, 1539-40 (D.C. Cir. 1989); see also *supra* notes 74-76 (the court's review of the EPA's policies and rules).

92. De Minimis Outline, *supra* note 83, at 6. The leachate must be generated using the Method 1312 or the Synthetic Acid Rain Leaching Procedure. *Id.*

93. 42 U.S.C. §§ 300f-300j-11 (1988).

94. If the generator does not hear from the Agency within the time frame and if the Agency does not request more time, the party can proceed to phase two. De Minimis Outline, *supra* note 84, at 6.

95. See *id.* (emphasis added).

96. *Id.*

97. *Id.*

98. *Id.*

Finally, as the strawman policy currently stands, the events occur in two phases. First, the party must submit a sampling and analysis plan to the agency for approval. The EPA then has sixty days to approve or suggest changes.⁹⁹ Second, the party may submit the results of the de minimis testing to the agency. Again, the EPA then has sixty days to act on the submission.¹⁰⁰

The expected date of release for the de minimis policy is January, 1991.¹⁰¹ Even before that time, however, parties should consider the current proposals on the de minimis exception and all other policies discussed in this Article in enforcement situations. Parties affected by these policies should take it upon themselves to become aware of the ramifications of all the policies, particularly the de minimis proposal. More importantly, they should correct any misunderstandings of any of the policies.

III. CONCLUSIONS

First, analysis of the application of the derived-from and mixture rules and the contained-in policy is complicated by the absence of a well-defined rationale to support the use and even the creation of the rules. For example, the contained-in policy has no legal authority cited to support it and the agency arguably avoided notice and comment procedures. Also, the rules for defining solid waste are not finalized despite the passage of a significant period of time. As frustrating is the seeming arrogance regarding the outcome of the litigation given that the law commands deference to agency actions.

Second, it is interesting to note the potential effects arising from the fact that the "backbone" rules for the regulation of hazardous waste, the definitions of solid and hazardous wastes and the mixture and derived-from rules, are not final. Certainly, from the parties' viewpoint, such uncertainty is not the best of groundworks upon which to make business decisions. Although prudence would dictate that an industry act as if the regulations were valid to avoid later problems, the conflicting or total lack of guidance and foundation arguably creates inefficiency by such conservatism.

Finally, as to the long-awaited de minimis exception from the definition of hazardous waste, certainly it is another step forward in the regulation of hazardous waste. It allows contaminated media or other wastes which do not pose a threat to health as required by Congress to be treated accordingly. This in turn could lead to decreased costs and administrative complexities for industries. The formal delisting process is avoided. However, it is difficult to understand why the agency intends to require testing for 180 toxicants in order to allow a material to be designated non-hazardous when

99. *Id.* In the 1980 preamble, EPA listed wastes considering the types of plausible mismanagement and stated "the hazard posed by a waste are not 'substantial' (§ 1004(5)(B)) if hazards could arise only as a result of implausible types of waste mismanagement." 45 Fed. Reg. 33,113 (1980). As the *Shell Oil* plaintiffs note, direct ingestion seems to be a rather implausible form of management. Petitioners Brief, *supra* note 21, at 57.

100. *Id.*

101. Telephone call to RCRA Hotline on September 18, 1990.

many of the constituents were not a reason for the material to be considered a hazardous waste in the first place. A better use of resources would be to require testing only for the constituents of concern in the material. Arguably, the potential liabilities looming under RCRA and CERCLA or common law theories will cause parties to err on the side of caution and perform any necessary testing and remediation. Furthermore, the current proposal based on direct ingestion health-based levels is also potentially overbroad, as the EPA in places recognizes.¹⁰²

Unfortunately, until the de minimis exception is promulgated, those generating, transporting, treating or disposing of hazardous waste must contend with the application and at times the misapplication of various rules. Further, there are a number of significant issues to be addressed in response to the proposal of the de minimis exception assuming the EPA elects to seek such input. Such issues as the scope of analytical requirements and the nature of the risk based assessment to be performed will undoubtedly generate significant debate. Industry desperate for a solution to the dilemma created by the derived-from and mixture rules and the contained-in policy must balance the benefits which might be derived from aggressively seeking to refine the exemption through comments and litigation versus the benefits of having the rule in place at the earliest possible date. Given the deference to agency rulemaking exhibited in this area, this choice may be reminiscent of that offered to the customers of a certain 17th century liveryman named Hobson.

102. 45 Fed. Reg. 33,113 (1980); see also Petitioners Brief, *supra* note 21, at 10.

