

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 268**

[EPA # 530-Z-96-PH3F-FFFFF; FRL-5676-4]

Land Disposal Restrictions Phase III—Emergency Extension of the K088 Capacity Variance**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: Under the Land Disposal Restrictions (LDR) program of the Resource Conservation and Recovery Act (RCRA), EPA is extending the current national capacity variance for spent potliners from primary aluminum production (Hazardous Waste Number K088) for six (6) months. Thus, K088 wastes do not have to be treated to meet LDR treatment standards until July 8, 1997, six months from the current treatment standard effective date of January 8, 1997. EPA is extending the national capacity variance due to unanticipated performance problems by the treatment technology which provides most of the available treatment capacity for these wastes. As a result, the Agency does not believe that sufficient treatment capacity which minimizes short and long-term threats to human health and the environment posed by land disposal of the potliners is presently available. The length of the extension of the national capacity variance is based on EPA's best current estimate of the time it will take to modify, evaluate, and correct the current deficiencies in treatment performance.

EFFECTIVE DATE: January 8, 1997.

ADDRESSES: Supporting materials are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA. The Docket Identification Number is F-96-PH3F-FFFFF. The RCRA Docket is open from 9 a.m. to 4 p.m. Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials by calling (703) 603-9230. The public may copy a maximum of 100 pages from any regulatory document at no cost. Additional copies cost \$0.15 per page.

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412-3323. For specific information, contact the Waste Treatment Branch (5302W), Office of Solid Waste (OSW), U.S. Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460; phone (703) 308-8434. For information on the capacity analyses, call Pan Lee or Bill Kline at (703) 308-8440. For information on the regulatory impact analyses, contact Paul Borst at (703) 308-0481. For other questions, call John Austin at (703) 308-0436 or Mary Cunningham at (703) 308-8453.

SUPPLEMENTARY INFORMATION: Today's final rule as well as the K088 Fact Sheet and the Index to the Record of materials in the docket are available on the Internet. Follow these instructions to access the information electronically: Gopher: gopher.epa.gov WWW: <http://www.epa.gov> Dial-up: 919 558-0335

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I. Background

A. The Existing Treatment Standard and National Capacity

Variance for Spent Potliners

On April 8, 1996, EPA promulgated a prohibition on land disposing spent potliners from primary aluminum production (Hazardous Waste K088) unless the waste satisfied the treatment standards for K088 established by EPA

as part of the same rulemaking. (61 FR 15566, April 8, 1996.) Spent potliners are a highly toxic hazardous waste, whose hazardous constituents include cyanide (present in concentrations between 0.1 and 1 percent, which are quite high for such a toxic constituent), toxic metals, and polycyclic aromatic hydrocarbons (PAHs). See the Final BDAT Background Document for Spent Potliners from Primary Aluminum Reduction—K088, February 29, 1995. These wastes also contain high concentrations of fluoride. See generally *id.* at 15584-585. Previous improper management of spent potliners has resulted in widespread groundwater contamination with cyanide and fluoride, and was an important factor in EPA's decision to list these materials as hazardous wastes. See 53 FR 35412, September 13, 1988. The treatment standards for K088 wastes require substantial reductions in the total concentration of organic hazardous constituents and cyanide, and substantial reductions in the leachability of toxic metals and fluoride. See 61 FR 15626, April 8, 1996. The reduction in leachability is measured by application of the Toxicity Characteristic Leaching Procedure (TCLP), SW-846 Method 1311. Id.

These treatment standards are based upon performance of combustion technology plus stabilization treatment of combustion residues. Id. at 15584. The treatment standard for fluoride is based upon the performance demonstrated by the treatment process developed by Reynolds Metals Company during studies conducted as part of their application for delisting¹ treated K088 from hazardous waste regulation. See 61 FR 15585, April 8, 1996. Although treatment standards were based upon these technologies, any treatment technology (other than impermissible dilution) may be used to achieve these established numerical standards. Data in the administrative record indicate that these treatment standards are achievable by a number of different technologies, including combustion followed by stabilization of the residue. See the Final BDAT Background Document for Spent Potliners from Primary Aluminum

¹ EPA granted a final exclusion from the lists of hazardous wastes contained in 40 CFR 261.32 —i.e., a delisting— for certain solid wastes derived from the treatment of K088 at Reynolds Metals Company, Gum Springs, Arkansas (56 FR 67197, December 30, 1991). The delisting is based on treating the same parameters covered by the LDR treatment standard, and compliance is also measured by TCLP analyses for toxic metals, PAHs, cyanide, and fluoride. The status of this delisting is discussed further in section V.A. of this Notice.

Reduction—K088, February 29, 1995, available in the docket.

Notwithstanding that a number of different treatment technologies can achieve the treatment standard, in fact, virtually all existing treatment capacity is provided by a single operation, the Reynolds treatment facility located in Gum Springs, Arkansas. See 61 FR 15589, April 8, 1996; Background Document for Capacity Analysis for Land Disposal Restrictions, Phase III (February 1996, Volume I, pages 4–4 to 4–11). The Reynolds process entails the crushing and sizing of spent potliner materials, the addition of roughly equal portions of limestone and a particular type of brown sand as flux, and the feeding of the combined mixture to a rotary kiln for thermal destruction of cyanide and PAHs. The process also is intended to reduce the mobility of soluble fluoride through the formation of insoluble calcium fluoride. Spent potliners (SPL) are generated in large volumes ranging from 100,000 to 125,000 tons annually.² Of the approximate 140,000 tons of treatment capacity EPA estimated was available, 120,000 tons are provided by Reynolds.³ Because of this potential bottleneck, EPA was concerned enough about the possibility for administrative delays in obtaining access to Reynolds' process that the Agency delayed the prohibition effective date by granting a nine-month national capacity extension, pursuant to RCRA section 3004(h)(2), to assure that logistical difficulties were resolved before the prohibition on land disposal became effective. 61 FR 15589, April 8, 1996; Background Document for Capacity Analysis for Land Disposal Restrictions, Phase III (February 1996, Volume I, pages 4–4 to 4–11).⁴ The prohibition (and applicable treatment standards) consequently is scheduled to take effect on January 8, 1997.

² Background Document for Capacity Analysis for Land Disposal Restrictions, Phase III (February 1996, Volume I, pages 4–5 to 4–8). Because SPL are not generated continuously, and because the rate of generation fluctuates according to the amount of aluminum produced, it is not possible to estimate this figure with more accuracy. Theoretically, an average of approximately 110,000 tons annually may be used for purpose of assessing available treatment capacity. There are generation data submitted after LDR Phase III was published and please see the docket files: 4/10/96 letter attached to July 9, 1996 petition from aluminum smelters and Reynolds' 11/25/96 submission in the Attachment of November 25, 1996 notes.

³ Background Document for Capacity Analysis for Land Disposal Restrictions, Phase III (February 1996, Volume I, pages 4–9 to 4–10).

⁴ Reynolds challenged EPA's decision in the D.C. Circuit and attempted to obtain expedited review of its petition, but the D.C. Circuit denied Reynolds' motion.

II. Subsequent Events

Reynolds presently uses its process to treat its own spent potliner K088 wastes and those from other sources, and disposes most of the residue in a dedicated landfill (i.e. a monofill receiving only these treatment residues) located at the treatment site. The company is also using these residues as fill material in unlined pits at a Hurricane Creek, Arkansas mining site, and as a test all-weather road surface at the mining site. (Trip Report, EPA, October 30, 1996). The treatment process appears to be destroying PAHs as predicted, and to be reducing total cyanide concentrations from initial concentrations ranging from 975 mg/kg to 6350 mg/kg to residual levels of 50 mg/kg to 150 mg/kg.⁵ For over two years, however, notwithstanding that the wastes as tested by the TCLP would have complied with the land disposal restriction treatment standards for the non-wastewater forms of K088, actual sampling data shows potentially high concentrations of hazardous constituents in the leachate from the dedicated monofill. As measured in September 1996, total cyanide concentrations in the leachate are 46.5 mg/L (the treatment standards for K088 wastewaters specify a concentration of 1.2 mg/L); arsenic concentrations are at 6.55 mg/L (treatment standard 1.2 mg/L); and fluoride concentrations are at 2228 mg/L (treatment standard 35 mg/L). (Gum Springs Leachate Analytical Results, Reynolds Metals Company, September 26, 1996).⁶ Analysis of surface water run-off from treated SPL used as test roadbeds at the Hurricane Creek Mine found total cyanide concentrations in the leachate of 2.0 mg/L (the treatment standards for K088 wastewaters specify a concentration of 1.2 mg/L); arsenic concentrations are at 1.24 mg/L (treatment standard 1.2 mg/L); and fluoride concentrations are at 229 mg/L (treatment standard 35 mg/L). (Arkansas Department of Pollution Control & Ecology, November 12, 1996). The Gum Springs monofill leachate also has a pH of 12.75 to 13.5, exceeding levels identifying a waste as hazardous due to the characteristic of corrosivity.⁷

⁵ See Table 2, 56 FR 33004, July 18, 1991 and attachments to December 9, 1996 letter from Pat Grover to Mike Shapiro.

⁶ EPA was not aware of these data until recently, and, in particular was not aware of these data during the rulemaking which established the K088 treatment standard. EPA notes further that the leachate from the landfill is being intercepted and collected by Reynolds, and so is not contaminating the environment at the treatment site. However, EPA also notes that there is no interception of leachate or runoff at the Hurricane Creek Mine Site.

⁷ As it happens, this elevated pH could provide a clue to why the treatment process is operating less well than predicted, and could be rectifiable.

The Reynolds process thus appears to be performing significantly less well than anticipated. Indeed, it does not appear to be reducing mobility of hazardous constituents significantly more than occurs in disposal of *untreated* spent potliners. Landfill leachate data obtained from two hazardous waste landfill cells receiving approximately 40 percent untreated SPL shows cyanide concentrations of 11 and 14 mg/L, arsenic concentrations of 0.56 and 0.11 mg/L, and fluoride concentrations of 2.3 and 0.001 mg/L respectively. (Staff Communication; November 20, 1996, fax of analytical data reports for landfill cells L12 and L13, Chemical Waste Management of the Northwest, Inc., Arlington, Oregon). Toxic constituents in the untreated Oregon Landfill data are significantly lower than observed in the leachate from the treated waste in the Gum Springs landfill. The Agency notes that some dilution and neutralization probably occurs from leachate produced by other wastes in the Oregon landfill, so that a direct comparison of the two different leachate results is only partially appropriate. However, the Agency believes the comparison is still relevant in that K088 is presently being disposed in the Oregon landfill, and this same K088 stream would be diverted to the Reynolds facility if the Agency did not take action today. The data available indicate that a more concentrated and toxic leachate would result from the Reynolds facility.

The Agency believes that the increased mobility of cyanide, fluoride, and arsenic are due to the highly alkaline conditions that exist at Reynolds' Gum Springs monofill. In the case of cyanide, for example, alkali-metallic cyanide complexes are soluble,⁹ and even insoluble iron cyanides can be solubilized under highly alkaline conditions.¹⁰ While the total cyanide concentration in the treated waste has been greatly reduced by Reynolds' treatment process, cyanide remaining in the residue would be environmentally mobile and in fact does appear in high concentrations in the alkaline leachate from the Gum Springs landfill. As a result, almost all remaining cyanide is detected in the Gum Springs leachate, where at a more neutral pH, only soluble free cyanide

⁹ Standard Methods for the Examination of Water and Wastewater, 16th Edition, APHA, AWWA, & WPCF, 1985, page 327.

¹⁰ *Id.*, page 330.

would be measured. In the case of the Oregon landfill, the leachate is of more neutral pH (i.e., pH 6.5 to pH 7.5) and only a small fraction of the constituents of concern are soluble even though the total concentration of toxics in the potliner being disposed is much higher. The Agency does not have information detailing the sources or properties of other hazardous wastes being co-disposed at the Oregon site, but again notes that their presence did not result in a more toxic leachate. EPA surmises that the co-disposed wastes provided some neutralization of the alkaline spent potliner. The extreme alkaline pH conditions that exist in the Gum Springs monofill were not anticipated by the Agency, and are not analogous to the test conditions (i.e. the TCLP) used to verify treatability and compliance with the delisting provisions.

III. EPA's Decision with Respect to Extending the National Capacity Variance

The root requirement of the land disposal restriction program is that treatment of hazardous wastes is to "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." RCRA section 3004(m)(1). To date, in the absence of a reliable means of quantifying when threats are minimized, EPA has implemented this requirement by requiring treatment to reflect the performance of Best Demonstrated Available Treatment technologies, in order to assure substantial reductions of a waste's toxicity and mobility before land disposal. See, e.g., 56 FR 6641 (Feb. 26, 1990).

There are certainly legitimate questions as to the degree of risk reduction through treatment needed to satisfy this minimize threat standard, and EPA has stated repeatedly that the statute does not require elimination of all threats or optimized treatment of each hazardous constituent in order to satisfy the requirement. See, e.g., *id.* at n. 1; 56 FR 12355, March 25, 1991. However, under the circumstances present here, EPA finds that the effectiveness of the Reynolds process, as operated, to minimize short-term or long-term threats sufficiently to satisfy the core statutory requirement must be seriously questioned. For instance, the levels of cyanide and arsenic (and also the less-toxic fluoride) in the leachate from the treated potliners is not significantly superior to that found

when untreated potliners are landfilled, as explained above.

The statute further provides in section 3004(h)(2) that EPA shall establish the effective date of a land disposal prohibition on the earliest date on which "adequate alternative treatment, recovery or disposal capacity which protects human health and the environment will be available". (Emphasis added.) See also sections 3004 (d)(1), (e)(1) and (g)(5), which require that land disposal of hazardous wastes ultimately be protective if land disposal is not to be prohibited. See 60 FR at 14473 (March 2, 1995); 56 FR at 41168 (Aug. 19, 1991); *Natural Resources Defense Council v. EPA*, 907 F.2d 1146, 1171-72 (D.C. Cir. 1990) (dissenting opinion). EPA cannot but take notice of two facts relevant here to whether Reynolds' process, as operated, provides treatment capacity which is protective of human health and the environment. First, because EPA has delisted the residues (see n.1 above and section V.A. below), Reynolds now disposes much of the treatment residue in a subtitle D unit. Although this unit appears to have adequate leachate collection and monitoring to prevent any immediate harm at the site, the monofill still lacks the safeguards subtitle C landfills have—such as double liners, financial responsibility, and more extensive monitoring and leachate collection. Second, Reynolds is placing some of the treatment residues as fill material in an unmonitored, unsupervised setting and no regulatory Agency has directly evaluated the potential for harm this type of disposal could be posing. While this use or disposal practice is presently legal under federal law, since the material is delisted, the Agency cannot say with any certainty (see RCRA sections (d)(1), (e)(1) and (g)(5)) that this practice protects human health and the environment. RCRA section 3004 (h) (2).¹¹

¹¹ As described in the text above, leachate and runoff levels of hazardous constituents from the fill area are presently significantly lower than from the landfill, although the levels are still of potential environmental concern (particularly given the unsecured disposal setting) and are higher than the K088 wastewater treatment standards. The lower levels undoubtedly result from the buffering effect of the acid mining material at the site. However, this buffering may not be permanent. In addition, it is important to evaluate total concentrations of hazardous constituents in the fill material because of the different types of exposure pathways (for example, air-borne particulate) that can result when wastes are placed in this type of uncontrolled setting. See generally 60 FR at 11732 (March 2, 1995) (proposal to prohibit use of hazardous waste as fill material). Reevaluation of this use will be one of the first matters EPA focuses on as it reexamines the decision to delist the K088 treatment residue. See section V.A. in the text.

EPA believes that treatment normally is adequate to be considered to be both minimizing threats to human health and the environment and to be protective of human health and the environment where there is substantial destruction of environmentally available toxics and/or substantial reduction of the mobility of toxic residuals. See 125 Cong. Rec. at S 9178 (statement of Sen. Chaffee introducing the provision which became RCRA section 3004(m) indicating that the land disposal restriction treatment standards are not to be technology forcing.) In almost all cases, simply meeting the treatment standards for the waste achieves this result. But where treatment is not operating so as to reduce environmental availability of key hazardous constituents appreciably more than disposal of untreated spent potliners, and where total and leachable arsenic may actually be increased by the treatment process, the Agency must question the adequacy of the treatment. Further, where disposal in subtitle C units may be safer than disposal of the residues in subtitle D landfills or in uncontrolled units, the Agency must seriously question the environmental consequences of expanded treatment operations at Gum Spring should the national capacity variance not be extended. The corrosivity and mobility of toxic constituents in the Gum Springs leachate, and the concentration of hazardous constituents in the leachate and runoff from the fill area, compels the Agency to find that the treatment process, as it is presently performing and as it includes disposal in non-subtitle C units, is not satisfying the requirement that threats posed by land disposal of the wastes be minimized and that the available treatment capacity be protective of human health and the environment.

In making this finding, EPA stresses that it is specific to this set of facts. The Agency does not mean to revisit the question of whether LDR standards should be technology-based or risk-based.¹² Nor should this action be read as automatically invoking risk-based levels to supplant technology-based treatment standards, or to vitiate a treatment standard whenever treatment performance turns out in practice to be less than predicted by analytic protocols such as the TCLP. Nor is land disposal

¹² As EPA has stated many times, the Agency's ultimate preference is to develop risk-based levels that reflect levels at which threats to human health and the environment are minimized, with the reasonable degree of certainty noted by the statute (RCRA section 3004(d)(1)). See, e.g. 56 Fed. Reg. at 6641; See also 60 FR 66344, December 21, 1995, the so-called "HWIR" proposal. The risk-based levels would then cap technology-based standards.

typically to be taken into account in establishing an LDR treatment standard. *American Petroleum Inst. v. EPA*, 906 F.2d 729, 734-37 (D.C. Cir. 1990). In fact, technology-based standards remain the best presently-available means of reducing threats posed by land disposal of hazardous wastes. Our finding here is a narrow response to particular facts: there has been on-going, consistent failure (in certain key aspects) of a treatment technology, and the failure is of a magnitude that, under the circumstances, disposal of untreated wastes in Subtitle C landfills is preferable to treatment of the wastes by this process followed by land disposal in non-subtitle C disposal units. Under these unusual circumstances, threats have not been adequately minimized and ultimate protectiveness has not yet been achieved.

A consequence of this finding is that the capacity for treatment that is protective is inadequate for spent potliners at this time. Since the Reynolds process provides virtually all available capacity, and EPA is finding that the process as it is presently performing does not protect human health and the environment (see RCRA section 3004 (h) (2)), the remaining treatment capacity is far below that needed to accommodate the volume of potliners being generated. Therefore, an extension of the existing national capacity variance is required.

IV. For How Long Should the National Capacity Variance Be Extended?

EPA continues to believe that Reynolds' process is inherently sound, and should be able to treat potliners in a manner that minimizes the threats their land disposal can pose. The process has been demonstrated to effectively destroy significant portions of the cyanide and PAHs present, and the stabilization technology has generally been effective in reducing soluble fluorides.¹³ In fact, the high degree of leaching presently occurring may be due to the high pH of each of the materials being combined in the treatment process (i.e., spent potliner, limestone, and brown sand). Spent potliner alone has been found to raise the pH of deionized water to 11.2 to 12.0.¹⁴ Brown sand is an alkaline mud

produced from the extraction of alumina from bauxite ore with sodium hydroxide, and contains significant concentrations of highly caustic sodium hydroxide residuals. The high alkalinity of brown sand together with SPL and limestone provides no neutralization of the inherent alkalinity; in confirmation, the pH of deionized water leach solutions of the Reynolds' treatment residue has been found to range from 11.9 to 12.2.¹⁵ This is a problem that may be rectified soon by using a different type of sand and keeping the pH of the treated solids within a particular range.

EPA is also aware of Reynolds' substantial investment of capital and expertise into developing this treatment process. The company also has complied with all applicable regulations in developing, implementing, and operating its process, seeking and obtaining RCRA permits for its process, and obtaining a delisting for the treatment residue. The company has also been complying with the terms of the delisting, which only require evaluation of newly-generated treatment residues for leachable cyanide, fluoride, PAHs, and TCLP metals. The Agency does not intend to take precipitous action that irrevocably undermines use of this still-promising treatment technology, or that discourages needed development of and investment in other treatment technologies (for potliners or for other hazardous wastes).

It is EPA's present judgment that the immediate problems with Reynolds' process could be resolved relatively quickly, possibly (as noted above) by substitution of different sand and other means of pH control. Brown sand functions only as a flux in the process to avoid the formation of lava like blockages in the kiln. Other high silica materials should perform equivalently as a flux, but should not contain or result in a highly alkaline treatment residue that promotes the mobility of hazardous constituents of concern. Process modifications and test trials of a sand substitute by Reynolds are planned or are underway. The Agency projects that six months may be required to complete these tests and data evaluation, and is, therefore extending the period of the national capacity variance until July 8, 1997. In the event that replacing the brown sand does not lower the pH, or that the lower pH does not eliminate the problems of the generation of a corrosive leachate

high in hazardous constituents, EPA will evaluate other technical options to provide for treatment of K088 that adequately minimizes threats posed by land disposal and proves ultimately to be protective. The Agency may extend the capacity variance for up to an additional nine (9) months, should process modifications be determined to have not resulted in adequate treatment. The Agency will make available to the public for comment any data or additional information it receives in response to this capacity extension.

V. Other Issues

A. Delisting

As noted above, EPA has delisted the residues from Reynolds' treatment process, relying in significant part on use of the TCLP as a predictor of actual environmental performance. (56 FR 67197, December 30, 1991.) These predictions have proven incorrect, at least in the short-term. EPA also did not anticipate, or directly evaluate the use of the treatment residue as fill or road construction material when it granted the delisting.

Authority to evaluate delistings is presently delegated to EPA Regional offices and to authorized States. EPA's Region 6 is presently evaluating the terms of the existing delisting and plans regulatory action regarding the delisting during the spring of 1997.

EPA notes that a determination that the Reynolds process (or any other treatment process) is treating sufficiently to be considered to minimize threats to human health and the environment does not necessarily mean that the residues from the treatment process would have to remain delisted. See, e.g. the text of RCRA section 3004(m)(2) which speaks directly of treatment residues which have been treated to minimize threats then being disposed in subtitle C disposal units. Thus, should EPA find that the Reynolds process is performing sufficiently well to satisfy land disposal restriction requirements, i.e. that the potliners have been treated sufficiently to allow their land disposal, the finding would not necessarily require retention of the current delisting. Conversely, and for the same reasons, a potential finding that the treatment residues should be relisted as hazardous wastes would not preclude a finding that the treatment is nevertheless sufficient to satisfy the requirement that substantial reductions in toxicity and mobility sufficient to minimize threats occur so that land disposal of the treatment residue is permissible.

¹³ EPA notes, however, that it may have to ultimately revise the treatment standard for fluoride, which is based on the performance of Reynolds' process. EPA will be seeking more information to more fully characterize the performance of the treatment process for fluoride during the extended national capacity variance period.

¹⁴ Attachments to December 9, 1996 letter from Pat Grover of Reynolds Metal Company to Michael Shapiro, Director, Office of Solid Waste. Results

cited are from the analysis of 100 grams of solid material leached with 2-Liters of deionized water (a 1:20 ratio).

¹⁵ Id.

B. Competing Treatment Technologies as BDAT

As discussed above, treatment technologies other than Reynolds' exist which could satisfy the existing treatment standards. Other technologies are being developed, and some of these recover resources from the potliner (as well as destroying hazardous constituents). See "Final BDAT Background Document for Spent Potliners from Primary Aluminum Reduction—K088", dated February 1995.

EPA is presently being urged to designate these recovery technologies as exclusive BDAT. See Supplemental Submission in Support of Amendment of Land Disposal Restrictions Phase III—Spent Potliners. Although EPA is still studying these submissions, the Agency notes that it does not regard its proper role as picking winners and losers among different treatment technologies, so long as the treatment technologies are achieving substantial reductions in toxicity and mobility of hazardous constituents sufficient to find that threats are being adequately minimized. (See, for example, 57 FR 37198 (August 18, 1992), where EPA chose to base treatment standards on performance of a technology which substantially reduces concentrations of hazardous constituents but does not perform as well as certain other available treatment technologies). Further, the Agency has established the Universal Treatment Standards (268.40) and has indicated a preference to use numerical limits whenever possible, to allow any legitimate treatment process to meet the standards.

EPA notes, in addition, that the Reynolds process is presently the only treatment process offering any appreciable treatment capacity for K088. Reynolds also took the initiative and developed and marketed this technology in advance of the land disposal prohibition for spent potliners. Given these facts, plus the technology's ability to achieve substantial reductions in the waste's toxicity through destruction of hazardous constituents, EPA does not initially believe it should disallow the process as a valid treatment technology (assuming the present operational problems are resolved). EPA notes moreover that as a legal matter, the LDR treatment standards are *not* intended to be technology-forcing (see 125 Cong. Rec. S 9178 (July 25, 1984) (statement of Sen. Chaffee)), but *are* intended to force utilization of existing treatment capacity where that capacity can significantly reduce wastes' toxicity and mobility. S. Rep. No. 284, 98th Cong. 1st sess. at 19.

Thus, as a matter of both policy and law, the Agency is disposed to retaining treatment standards for spent potliners that are achievable by a number of treatment technologies, and to try and hasten the use of currently existing technologies provided their performance and operation adequately minimize threats posed by land disposal of the potliners.¹⁶

Thus, the Agency's initial inclination is not to amend the current treatment standard for spent potliners to establish any particular technology as BDAT.

VI. Disposal of Potliners During National Capacity Variance Period

Section 3004(h)(4) states that during periods of national capacity variances (and case-by-case extensions), hazardous wastes subject to those extensions that are disposed in landfills (and surface impoundments) may only be so disposed if the landfill (or impoundment) is in compliance with the minimum technology requirements of section 3004(o). EPA has interpreted this language as requiring the individual unit receiving the waste to be in compliance with those so-called minimum technology standards, an interpretation sustained in *Mobil Oil v. EPA*, 871 F.2d 149 (D.C. Cir. 1989). In addition, EPA has indicated that this requirement only applies to wastes that are still hazardous when disposed. 55 Fed. Reg. at 22659-60 (June 1, 1990).

Putting this together, this means that during the extended period of the national capacity extension, generators other than Reynolds will dispose of K088 wastes in landfill units that satisfy the minimum technology requirements of section 3004(o). Reynolds' treatment residue is not subject to these requirements because it has been delisted, and so is not a hazardous waste. Should there be action reclassifying that treatment residue as a hazardous waste and should the national capacity extension still be in effect, then such residues would also be required to be disposed in landfill units satisfying minimum technology requirements (assuming that landfill disposal is utilized).

VII. Regulatory Requirements

A. Regulatory Impact Analysis Pursuant to Executive Order 12866

Executive Order No. 12866 requires agencies to determine whether a

¹⁶The Senate Report also states that "[i]t is not intended, that a generating industry, for example, could be allowed to continue to have its wastes disposed of in an otherwise prohibited manner solely by binding itself to using a facility which has not been constructed." S. Rep. No. 284, 98th Cong. 2d sess. at 19.

regulatory action is "significant." The Order defines a "significant" regulatory action as one that "is likely to result in a rule that may: (1) Have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order."

The Agency and OMB consider today's final rule to be nonsignificant as defined by the Executive Order and therefore not subject to the requirement that a regulatory impact analysis has to be prepared. Today's rule delays for six months the imposition of treatment standards for spent aluminum potliners that were estimated previously by EPA to cost between \$11.9 million and \$47.3 million (61 FR 15566 and 15591, April 8, 1996). Thus, today's rule results in net savings over this period of time and prevents any potential hardship that would otherwise result from the lack of available thermal treatment capacity for spent aluminum potliner.

B. Unfunded Mandates Reform Act

Under Section 202 of the Unfunded Mandates Reform Act of 1995, signed into law on March 22, 1995, EPA must prepare a statement to accompany any rule where the estimated costs to State, local, or tribal governments in the aggregate, or to the private sector, will be \$100 million or more in any one year. Under Section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objective of the rule and is consistent with the statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly impacted by the rule.

EPA has presented an analysis of the costs of implementing the prior LDR Phase III rule (61 FR 15566, April 8, 1996) and has determined that this rule does not include a Federal mandate that may result in estimated costs of \$100 million or more to either State, local, or tribal governments in the aggregate. As stated above, the private sector is not expected to incur costs exceeding \$100

million per year due to the delayed implementation of the land disposal restrictions for K088 wastes. EPA has fulfilled the requirement for analysis under the Unfunded Mandates Reform Act.

C. Submission to Congress and the General Accounting Office

Under 5 U.S.C. 801(a)(1)(A) as added by the Small Business Regulatory Enforcement Fairness Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller General of the General Accounting Office prior to publication of the rule in today's Federal Register. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

VIII. Immediate Effective Date

EPA has determined to make today's action effective immediately. The Agency believes that there is good cause to do so, within the meaning of 5 U.S.C. section 553(b)(B). The current regulatory prohibition is scheduled to take effect on January 8, 1997. Should the Agency fail to act before that time, EPA believes that actions will occur which are both contrary to the objectives of the Land Disposal Restriction statutory provisions, and also environmentally worse than disposal of untreated hazardous waste in subtitle C units. Specifically, if the prohibition takes effect, virtually the entire national volume of potliners will be sent for treatment and disposal to the Reynolds facility. This is because, as set out in this Notice, the Reynolds process is presently operating poorly and because the treatment residues from that process

are disposed in units other than subtitle C units. The result is treatment that does not minimize threats and disposal which could be less protective than disposal of untreated wastes in subtitle C units.

Good cause to forego notice-and-comment procedures exists where use of those procedures is contrary to the public interest. 5 U.S.C. section 553(b)(B). EPA believes it would be contrary to the public interest to force treatment of many thousands of tons of hazardous waste which could result in net environmental detriment, as set out in the preceding paragraph. For essentially the same reasons, EPA finds that use of notice-and-comment procedures would be impractical (again within the meaning of 5 U.S.C. section 553(b)(B)).

Finally, EPA notes that it has endeavored to provide actual notice and opportunity for comment on this action. EPA has held a number of meetings with both Reynolds and affected primary aluminum generators (noted in the record for this action), solicited and accepted written submissions from these entities (again part of the administrative record), and made each sides' submissions available to the other for response. The Agency has also had contacts (albeit more limited) with representatives of the hazardous waste treatment industry and the environmental community. Notice and opportunity for comment of course satisfies all procedural requirements of the Administrative Procedure Act (as to parties receiving such notice). 5 U.S.C. section 553(b).

For all of these reasons, EPA finds that this rule may be made effective immediately. In addition, because there

is good cause to forego notice-and-comment procedures, the rule may take effect upon promulgation without prior submission of the rule to the Congress. 5 U.S.C. section 808. EPA will thereafter submit the rule to Congress, as required by 5 U.S.C. section 801(a).

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: January 8, 1997.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 268—LAND DISPOSAL RESTRICTIONS

1. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

2. Section 268.39 is amended by revising paragraph (c) to read as follows:

§ 268.39 Waste specific prohibitions—spent aluminum potliners; reactive; and carbamate wastes.

* * * * *

(c) On July 8, 1997, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal on July 8, 1997.

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[FR Doc. 97-878 Filed 1-10-97; 9:32 am]

BILLING CODE 6560-50-P