Site-Specific LDR Treatment Variances

530-Z-98-001

federal register

Tuesday
May 26, 1998

Part II

Environmental Protection Agency

40 CFR Parts 148, 261, 266, 268, and 271
Land Disposal Restrictions Phase IV: Final Rule Promulgating Treatment Standards for Metal Wastes and Mineral Processing Wastes; Mineral Processing Secondary Materials and Bevill Exclusion Issues; Treatment Standards for Hazardous Soils, and Exclusion of Recycled Wood Preserving Wastewaters; Final Rule

land disposal are minimized. Technology-based standards provide an objective measure of assurance that hazardous wastes are substantially treated before they are land disposed, thus eliminating the "long-term uncertainties associated with land disposal." Eliminating these uncertainties was a chief Congressional objective in prohibiting land disposal of untreated hazardous wastes. Hazardous Waste Treatment Council v. EPA, 886 F.2d at 361–64. In addition, the extent of treatment required, 90 % reduction capped at treatment to concentrations within an order of magnitude of the UTS, "substantially" reduces mobility or total concentrations of hazardous constituents within the meaning of RCRA Section 3004(m)(1).

EPA has made two changes from proposal which strengthen the soil treatment standards to assure that they minimize threats to human health and the environment. First, the Agency has modified its approach to which hazardous constituents will be subject to treatment. In today's rule, when the soil treatment standards are used, EPA requires treatment for all hazardous constituents reasonably expected to be present in contaminated soil when such constituents are initially found at concentrations greater than ten times the universal treatment standard. This treatment is required both for soil contaminated by listed hazardous waste and soil that exhibits (or exhibited) a characteristic of hazardous waste. Constituents subject to treatment are discussed further in Section VII.B.4 of today's preamble.

To further ensure that contaminated soil treated to comply with the soil treatment standards is safely managed, EPA has included additional restrictions on the use of treated contaminated soil in hazardous waste-derived products that are used in a manner constituting disposal (i.e., when such products will be placed on the land). The restrictions on use of treated contaminated soil in hazardous waste-derived products that are used in a manner constituting disposal are discussed in Section VII.B.5 of today's preamble.

Finally, the Agency reiterates that, in the remediation context, in assessing whether threats posed by land disposal have been minimized, one should appropriately consider the risks posed by leaving previously land disposed waste in place as well as the risks posed by land disposal of waste after it is removed and treated. 62 FR at 64506 (December 5, 1997). For example, if a treatment standard for organic constituents based on performance of incineration typically results in already land disposed materials such as contaminated soils being capped in place rather than more aggressively remediated, threats posed by land disposal of the waste ordinarily would not be minimized. Conversely, a treatment standard that results in substantial treatment followed by secure land disposal can be said to minimize threats, taking into account the totality of threats posed (i.e. including those posed if the soil were left in place untreated). *Id.* The soil treatment standards will ordinarily ensure that contaminated soil is appropriately treated within the meaning of RCRA Section 3004(m), considering both the threats posed by new land disposal of treated soil and the threats posed by on-going land disposal of existing contaminated soil (e.g., if the soil were left in place untreated).

EPA recognizes that some people may be concerned that a situation may arise where the soil treatment standards are at levels that are higher than those that EPA or an authorized state believes should be required for soil cleanup under a cleanup program. The Agency acknowledges that this may occur. The soil treatment standards, like other land disposal restriction treatment standards, are based on the performance of specific treatment technologies. As discussed earlier in today's preamble, technology-based standards have been upheld as a permissible means of implementing RCRA Section 3004(m). Most soil cleanup levels are based not on the performance of specific treatment technologies but on an analysis of risk. For this reason, technology-based treatment standards will sometimes over-and sometimes under-estimate the amount of treatment necessary to achieve site-specific, risk-based goals.

The purpose of the land disposal restriction treatment standards is to ensure that prohibited hazardous wastes are properly pre-treated before disposal (i.e., treated so that short- and long-term threats to human health and the environment posed by land disposal are minimized). As discussed above, the Agency believes the soil treatment standards promulgated today fulfill that mandate for soil that contains prohibited listed hazardous waste or exhibits a characteristic of prohibited hazardous waste. However, technology-based treatment standards are not necessarily appropriate surrogates for site-specific risk-based cleanup levels. In a circumstance where the soil treatment standards result in constituent concentrations that are higher than those determined, on a site-specific basis, to be required for soil cleanup, existing remedial programs such as RCRA Corrective Action, CERCLA and state cleanup programs could be applie. to ensure that remedies are adequately protective. These programs already ensure protection of human health and the environment when managing most contaminated soils—i.e., soils that are not subject to the LDRs—and other remediation wastes. Furthermore, as discussed later in today's rule, treated contaminated soil would remain subject to regulation under RCRA Subtitle C unless and until EPA or an authorized state made an affirmative decision that the soil did not contain hazardous waste or, in the case of characteristic soil, no longer exhibited a hazardous characteristic.

3. Variance From the Soil Treatment Standards at Risk-Based Levels

EPA has long indicated that its preference would be to establish a complete set of risk-based land disposal treatment standards at levels that minimize short- and long-term threats to human health and the environment. See, for example, 55 FR at 6641 (Feb. 26, 1990). However, the difficulties involved in establishing risk-based standards on a nationwide basis are formidable due in large part to the wide variety of site-specific physical and chemical compositions encountered in the field and the uncertainties involved in evaluating long-term threats posed by land disposal. *Id.*; 60 FR 66380—66081 (Dec. 21, 1995). For these reasons the Agency has chosen to establish land disposal restriction treatment standards based on the performance of specific treatment technologies. Although technology-based treatment standards are permissible, they may not be established at levels more stringent than those necessary to minimize short and long-term threats to human health and the environment. Hazardous Waste Treatment Council, 886 F. 2d at 362 (land disposal restriction treatment standards may not be established, "beyond the point at which there is not a "threat" to human health or the environment").

While using risk-based approaches to determine when threats are minimized on a national basis has proven extremely difficult, these difficulties will diminish when evaluating risks posed by a specific contaminated soil in a particular remediation setting since, during remediation, one typically has detailed site-specific information on constituents of concern, potential human and environmental receptors, and potential routes of exposure. For this reason, EPA is establishing a site-specific variance from the technology-based soil treatment standards, which

can be used when treatment to concentrations of hazardous constituents greater (i.e., higher) than those specified in the soil treatment standards minimizes short- and long-term threats to human health and the environment. In this way, on a case-by-case basis, risk-based LDR treatment standards approved through a variance process could supersede the technology-based soil treatment standards. This approach was first discussed in the September 14, 1993 proposal, where EPA proposed that determinations that contaminated soil did not or no longer contained hazardous waste could supersede LDR treatment standards, if the "contained-in" level also constituted a "minimized threat" level. It was repeated in the April 29, 1996 proposal where the Agency proposed that, in certain circumstances, variances from land disposal restriction treatment standards could be approved in situations where concentrations higher than the treatment standards minimized threats.[18] 58 FR at 48128 (September 14, 1993) and 61 FR at 18811 and 18812 (April 29, 1996).

At this time, EPA is allowing the risk-based variances only for contaminated soils. The Agency believes this limitation is appropriate for a number of reasons. First, contaminated soils are most often generated during agency overseen cleanups, such as CERCLA cleanups, RCRA corrective actions or state overseen cleanups. This type of involvement in cleanups positions EPA and authorized states to appropriately consider site-specific, risk-based issues. Second, during remediation, experts and field personnel typically gather detailed site-specific information on risks posed by specific hazardous constituents or combinations of hazardous constituents, potential direct and indirect exposure routes, risk pathways and human and environmental receptors. Through application of this information, overseeing agencies can eliminate many of the long-term uncertainties associated with land disposal and, therefore, make appropriate risk-based decisions regarding the extent of treatment needed to minimize short- and long-term threats to human health and the environment from any given hazardous constituent or combination of hazardous constituents. EPA and state officials already routinely make these types of decisions when developing site-specific, risk-based cleanup levels and when making decisions about whether any given contaminated medium contains hazardous waste.[19] After experience implementing the site-specific minimize threat variance for contaminated soil, the Agency may consider extending it to other environmental media and remediation wastes.

Some commenters expressed concern that allowing site-specific, risk-based minimize threat determinations would abrogate the Agency's responsibilities under RCRA Section 3004(m). The Agency strongly disagrees. RCRA Section 3004(m) requires EPA to establish "levels or methods of treatment, if any, * * *." In the case of contaminated soil, EPA is establishing those levels today based on the performance of available, appropriate soil treatment technologies. Providing a variance process to modify a level or method of treatment on a case-by-case basis reduces the likelihood that in any particular situation technology-based treatment standards will result in treatment beyond the point at which threats are minimized. The Agency is requiring that minimize threat variance determinations for contaminated soils be evaluated using the existing site-specific variance process set out in 40 CFR 268.44(h). EPA recently added language to this provision to clarify that variances cannot be approved without opportunity for public participation, including notice by appropriate means, opportunity for public comment and adequate explanation of an ultimate determination. 62 FR at 64507 (Dec. 5, 1997).

While not required, EPA anticipates that decisions about site-specific minimize threat decisions variances will often be combined with decisions that soil no longer contains hazardous waste. As discussed later in today's preamble, Agency guidance on "contained-in" determinations is essentially the same as the requirements for site-specific, risk-based minimize threat determinations promulgated today. For that reason, EPA believes it will always be appropriate to combine a contained-in determination with a site-specific, risk-based minimize threat variance. In these cases, EPA encourages program implementors and facility owners/operators to include information about the "contained-in" decision in the public notice of the site-specific minimize threat variance. In cases where a site-specific minimize threat variance is combined with a decision that a soil no longer contains hazardous waste, once treated to comply with the treatment standard imposed by the variance, the soil would no longer have any obligations under RCRA Subtitle C and could be managed—including land disposed—without further control under RCRA Subtitle C. The contained-in policy is discussed in more detail in Section VII.B.8 and Section VII.E of today's preamble.

EPA reminds program implementors that, consistent with the rest of the land disposal restriction program, site-specific determinations that threats are minimized cannot be based on the potential safety of land disposal units, or engineered structures such as liners, caps, slurry walls or any other practice occurring after land disposal. American Petroleum Inst. v. EPA, 906 F.2d 729, 735–36 (D.C. Cir. 1990) (land treatment cannot be considered in determining whether threats posed by land disposal have been minimized because land treatment is a type of land disposal and section 3004(m) requires that threats be minimized before land disposal occurs); see also S. Rep. No. 284, 98th Cong. 1st sess. at 15, stating that engineered barriers cannot be considered in assessing no-migration variances because "[a]rtificial barriers do not provide the assurances necessary to meet the standard." This means that site-specific minimize threat determinations must be based on the inherent threats any given contaminated soil would pose. The Agency recognizes that this will have the effect of precluding site-specific minimize threat variances for remedies that rely, even in part, on capping, containment or other physical or institutional controls. In

[18] In the April 29, 1996 proposal, the Agency proposed to limit variances based on a site-specific minimize threat determination to contaminated soils where all concentrations of hazardous constituents were below a "bright line," that is, below a certain risk level. The Agency also requested comment on extending site-specific minimize threat variances to other contaminated soils. Based on further consideration and consideration of comments, the Agency is persuaded that a site-specific minimize threat variance should be available to all contaminated soils. The Agency believes this is proper because the outcome of a site-specific, risk-based minimize threat variance—alternative, site-specific LDR treatment standards based on risk—will be the same regardless of the initial concentrations of hazardous constituents. In any case, the Agency is not, at this time, taking action on the portion of the April 29, 1996 proposal that would have established a "bright line" to distinguish between higher- and lower-risk media. If, in the future, the Agency takes action to establish a bright line, it will address the relationship of a bright line to site-specific minimize threat variances.

[19] While not forbidden, the Agency believes that site-specific, risk-based minimize threat determinations will rarely be made in the context of an independent or voluntary cleanup action, since, in these types of actions, an overseeing Agency will not, typically, have been involved in the identification exposure pathways and receptors of concern or the calculation of site-specific, risk-based cleanup levels. Of course, generators could apply for a site-specific, risk-based minimize threat variance during an independent or voluntary cleanup and, provided EPA or an authorized state agreed that the proposed alternative treatment standards minimized threats considering appropriate exposure pathways and receptors, a variance could be approved.

addition to being compelled by the statute, the Agency believes this approach is proper, in that it may encourage remedy choices that rely more predominantly on treatment to permanently and significantly reduce the concentrations (or mobility) of hazardous constituents in contaminated soil. The Agency has a strong and longstanding preference for these types of more permanent remedial approaches.

In addition, at a minimum, alternative land disposal restriction treatment standards established through site specific, risk-based minimize threat variances should be within the range of values the Agency generally finds acceptable for risk-based cleanup levels. That is, for carcinogens, alternative treatment standards should ensure constituent concentrations that result in the total excess risk from any medium to an individual exposed over a lifetime generally falling within a range from 10^{-4} to 10^{-6}, using 10^{-6} as a point of departure and with a preference, all things being equal, for achieving the more protective end of the risk range. For non-carcinogenic effects, alternative treatment standards should ensure constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime; in general, the hazard index should not exceed one (1). Constituent concentrations that achieve these levels should be calculated based on a reasonable maximum exposure scenario—that is, based on an analysis of both the current and reasonably expected future land uses, with exposure parameters chosen based on a reasonable assessment of the maximum exposure that might occur. The Agency believes these represent an appropriate range of minimum values for site-specific, risk-based minimize threat determinations because sites cleaned up to these levels are typically released from regulatory control under the Federal CERCLA program and the RCRA corrective action program. See, for example, the National Contingency Plan (55 FR 8666, March 8, 1990) the 1990 RCRA Corrective Action Subpart S Proposal (55 FR 30798, July 27, 1990), and the 1996 RCRA Corrective Action Subpart S ANPR (61 FR 19432, May 1, 1996). In addition to achieving protection of human health, alternative treatment standards must ensure that environmental receptors are protected and must also ensure that no unacceptable transfer of contamination from one medium to another, for example, from soil to ground water, will occur.[20] Protection of environmental receptors and against cross-media contamination may, in some cases, require more stringent (i.e., lower) alternative treatment standards than would be necessary to protect human health alone. The Agency recognizes that this approach is different from the approach used in developing national risk-based minimize threat levels proposed in the Hazardous Waste Identification Rule (HWIR-Waste). 60 FR 66344 (December 21, 1995). This difference is proper, in that the HWIR-Waste proposal contemplated nationally-applicable risk-based LDR treatment standards and, therefore, had to consider the myriad of potential exposure pathways and receptors which might occur at any given site, nation wide. A site-specific minimize threat determination is informed by actual and reasonable potential exposure pathways and receptors at a specific land disposal location.

Although not expressly limited to land disposal of contaminated soil on-site, EPA anticipates that site-specific minimize threat variances will, most often, be applied to these activities. The basis for developing an alternative land disposal restriction treatment standard during the site-specific minimize threat variance is application of risk information about specific exposure pathways and receptors of concern. To apply such a variance to off-site land disposal, the treatment standard would have to be informed by the exposure pathways and receptors present at the off-site land disposal areas (assuming no physical or engineered structures or other post-land-disposal controls). While such an analysis is allowed, this information is not, to the Agency's knowledge, routinely gathered during site remediation.

Most commenters supported the concept of using a treatment variance to reduce the likelihood that, in any particular case, technology-based soil treatment standards might prompt treatment beyond the point at which threats to human health and the environment are minimized.

One commenter was concerned that establishing a risk-based minimize threat variance without adequate minimum standards would be contrary to law and impossible to oversee. EPA was, in part, persuaded by these comments and has added a requirement that, at a minimum, alternative LDR treatment standards approved through a site-specific minimize threat variance be within the range of acceptable values the Agency typically uses for cleanup decisions, as discussed above. In addition, as discussed above, the Agency has clarified that, unlike some CERCLA or RCRA corrective action remedies, site-specific minimize threat variances may not rely on post-land disposal controls.

4. Constituents Subject to Treatment

For soil contaminated by listed hazardous waste, EPA proposed that treatment would be required for each hazardous constituent originating from the contaminating waste. For soil which exhibits (or exhibited) a characteristic of hazardous waste, EPA proposed that treatment would be required: (1) in the case of TC soil, for the characteristic contaminant; (2) in the case of ignitable, reactive or corrosive soil, for the characteristic property; and, (3) in both cases, for all underlying hazardous constituents. 61 FR at 18809 (April 29, 1996). Under the 1996 proposal, treatment would have been required only when those constituents were initially present at concentrations greater than ten times the universal treatment standard. EPA also requested comment on, among other things, whether, for soil contaminated by listed hazardous waste, treatment should be required for all underlying hazardous constituents present at concentrations above ten times the UTS. Underlying hazardous constituent is defined in 40 CFR 268.2(i) as, "any constituent listed in 40 CFR 268.48 table UTS, except fluoride, sulfides, vanadium, selenium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standards."

Many commenters supported the proposed approach. Some commenters, however, expressed concern that, because contaminated soil often contains numerous hazardous constituents from a variety of sources, limiting treatment of soil contaminated by listed hazardous waste to constituents originating from the contaminating waste might result in soil contaminated with listed waste undergoing less treatment than soil which exhibits (or exhibited) a characteristic of hazardous waste. One commenter also asserted that the proposed approach to constituents subject to treatment was, in the case of soil contaminated by listed hazardous waste, inconsistent with the Chemical Waste opinion. On further consideration, EPA was persuaded that it is prudent to apply the logic of the

[20] Unacceptable cross-media transfer would include, for example, transfer of contaminants from soil to air in excess of applicable air emission standards.

federal register

Friday
December 5, 1997

Part V

Environmental Protection Agency

40 CFR Part 268

Clarification of Standards for Hazardous Waste Land Disposal Restriction Treatment Variances; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[No. F-97-TV2F-FFFFF; FRL-5932-5]

Clarification of Standards for Hazardous Waste Land Disposal Restriction Treatment Variances

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: EPA is today finalizing clarifying amendments to the rule authorizing treatment variances from the national Land Disposal Restrictions (LDR) treatment standards. The clarifying changes adopt EPA's longstanding interpretation that a treatment variance may be granted when treatment of any given waste to the level or by the method specified in the regulations is not appropriate, whether or not it is technically possible to treat the waste to that level or by that method. In response to comment, the Agency is indicating in the rule the circumstances when application of the national treatment standard could be found to be "inappropriate", specifically where the national treatment standard is unsuitable from a technical standpoint or where the national treatment standard could lead to environmentally counterproductive results by discouraging needed remediation.

In addition, EPA proposed to reissue the treatment variance granted to Citgo Petroleum under the clarified standard. The Agency is not taking further action on this part of the proposal because, due to changes in Citgo's remediation plans for its Lake Charles Louisiana facility, this particular variance has become moot. The Agency is consequently withdrawing the Citgo variance.

EFFECTIVE DATE: These final regulations are effective December 5, 1997.

ADDRESSES: The official record for this rulemaking is located at the RCRA Information Center at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, Virginia. The RCRA Information Center is open from 9:00 a.m. to 4:00 EST p.m., Monday through Friday, except Federal holidays. The Docket Identification Number for today's action is F-97-TV2F-FFFFF. Appointments to review docket materials are recommended. Appointments may be made by calling (703) 603-9230. Individuals reviewing docket materials may copy a maximum of 100 pages from any one docket at no cost. Additional copies may be made at a cost of $0.15 per page. In addition, the docket index and some supporting materials are available electronically. See the **SUPPLEMENTARY INFORMATION** section for information on accessing electronic information.

FOR FURTHER INFORMATION CONTACT: For general information on RCRA, land disposal treatment variances, and this rule contact the RCRA Hotline, between 9:00 a.m. and 6:00 p.m. EST, Monday through Friday, except Federal holidays. The RCRA Hotline can be reached toll free on (800) 424-9346 or, from the Washington D.C. area, on (703) 412-9810. Hearing impaired can reach the RCRA Hotline on TDD (800) 553-7672 or, in the Washington D.C. area, on TDD (703) 412-3323. For detailed information on specific aspects of this rulemaking, contact Elizabeth McManus on (703) 308-8657.

SUPPLEMENTARY INFORMATION:

Accessing Today's Rule and Supporting Information Electronically

Today's final rule, its docket index and the following supporting materials are available electronically and may be accessed through the Internet: To access these documents electronically: "Use of Site-Specific Land Disposal Restriction Treatability Variances Under 40 CFR 268.44(h) During Cleanups" U.S. EPA guidance memorandum from Michael Shapiro, Director EPA Office of Solid Waste and Steve Luftig, Director EPA Office of Emergency and Remedial Response, Jan. 8, 1997.

WWW: Http://www.epa.gov/epaoswer/hazwaste/ldr/ldr-rule.htm
FTP: ftp.epa.gov
Login: anonymous
Password: your Internet address

Files are located in /pub/epaoswer/hazwaste/ldr/ldr-rule.htm.

Table of Contents

I. Background

The essential requirement of the Land Disposal Restrictions (LDR) statutory provisions is that hazardous wastes must not be land disposed until hazardous constituent concentrations in the wastes are at levels at which threats to human health and the environment are minimized, and land disposal is otherwise protective of human health and the environment. RCRA sections 3004 (d), (e), (g) and (m); 56 FR at 41168, August 19, 1991; 62 FR at 26062, May 12, 1997. These requirements normally are satisfied by prohibiting disposal of hazardous wastes until the wastes' hazardous constituent concentrations reflect the performance achievable by the Best Demonstrated Available Treatment technology (BDAT). 62 FR at 26062, May 12, 1997.

EPA recognized from the inception of the LDR program, however, that there would be circumstances when these technology-based treatment standards might not be either achievable or appropriate. Accordingly, EPA adopted a treatment variance provision (codified in 40 CFR 268.44; 51 FR at 40605-40606, Nov. 7, 1986) providing that:

> Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may petition the Administrator for a variance from the treatment standard. The petitioner must demonstrate that because the physical or chemical properties of the waste differs significantly from the wastes analyzed in developing the treatment standard, the waste cannot be treated to [the] specified levels or by the specified methods.

A treatment variance takes the form of an alternative LDR treatment standard. Nationally applicable variances and site-specific variances that are approved using rulemaking procedures are codified in the Table to § 268.44, 40 CFR 268. 44(o). Site-specific variances that are approved using non-rulemaking procedures are not codified.

As set out in more detail in the May 12 notice, EPA has interpreted the first sentence of the treatment variance provision as creating two independent tests under which treatment variance applications can be considered: first, where the waste in question cannot be treated to levels or by the methods established in the rules; and second, where such treatment may be possible but is nevertheless "not appropriate". 62 FR at 26059, May 12, 1997. EPA has further viewed the second sentence of the treatment variance provision—which refers to a demonstration that the waste differs chemically or physically from those the Agency analyzed in developing the standard—as applying only to the technical infeasibility part of the standard. 62 FR at 26059, May 12,

1997. However, EPA now recognizes that the existing rule, as drafted, might be read to require a demonstration that a waste is physically or chemically different along with a showing that it cannot be treated to a specified level or by a particular method whenever a treatment variance is sought, including situations where the otherwise applicable treatment standard is technically possible but, nonetheless, inappropriate. This was not EPA's intent, and EPA initiated this rulemaking to remove any drafting ambiguity in the rule.

II. Clarified Standard for Granting Treatment Variances

EPA is finalizing the proposed amendment to the rule, with two changes. First, EPA is clarifying the situations under which treatment variances may be approved because the otherwise applicable LDR treatment standard is "inappropriate." Second, the Agency is adding language that explicitly requires alternative LDR treatment standards approved through the treatment variance process to satisfy the requirement that treatment standards result in substantial treatment of hazardous constituents in the waste so that threats posed by the waste's land disposal are minimized, and also indicates that special considerations may arise in satisfying this standard if the waste is to be used in a manner constituting disposal.[1]

A. Clarification of "Inappropriate" Standard

The Agency proposed amended language simply stating that a treatment variance could be granted if it is "inappropriate" to require treatment to the level or by the method set out in the rules. 62 FR at 26081, May 12, 1997. In the preamble to the proposal, the Agency provided examples as to the situations when application of the otherwise applicable standard could be inappropriate. 62 FR at 26059–26060, May 12, 1997. In response to comment maintaining that the rule language was impermissibly open-ended, EPA has decided to include language codifying more particularly when a standard could be "inappropriate". These circumstances are drawn from EPA's practice in applying the existing rule and are consistent with the examples discussed in the preambles to the proposal and the HWIR-Media proposal. 61 FR at 18810, April 29, 1996.

The first circumstance is when imposition of BDAT treatment, while technically possible, remains unsuitable or impractical from a technical standpoint. The chief example is when a treatment standard would result in combustion of large amounts of mildly contaminated soil or wastewater. 55 FR at 8760 and 8761, March 8, 1990; 61 FR at 18806–18808, April 29, 1996 and other sources cited therein. The same reasoning could apply when media is contaminated with metal contaminants and also contains low levels of organic contaminants. In such a case, it may be inappropriate to require combustion treatment of the organic contaminants both because it may be inappropriate to combust media generally and because it may be inappropriate to combust wastes where metals are the chief hazardous constituent.[2] Another potential example of where treatment for organic contaminants may be technically inappropriate is when a waste contains low concentrations of non-volatile organic contaminants (for example, concentrations slightly exceeding a Universal Treatment Standard) and the waste, for legitimate reasons, has been stabilized. If the mobility of the non-volatile organic contaminants has been reduced, it might be inappropriate to require further treatment of the non-volatile organic contaminants. Cf. 61 FR at 55724, Oct. 28, 1996 where EPA made a similar finding. Still another example of a situation where the otherwise applicable LDR treatment standard is technically inappropriate could be a case where BDAT treatment could expose site workers to acute risks of fire or explosion and an alternative technology would not. 62 FR at 26060, May 12, 1997. In all these types of circumstances, notwithstanding that it is technically possible to achieve the standard by using the best demonstrated available technology, it could be inappropriate to do so.

The second set of circumstances where treatment to the limit of best demonstrated available technology might be inappropriate involves cases where imposition of the otherwise applicable treatment standard could result in a net environmental detriment by discouraging aggressive remediation. The example EPA and authorized states have encountered most often to date is where federal rules allow the option of leaving wastes in place,[3] and a facility then has the choice of pursuing the legal option of leaving the wastes in place or opting to excavate thereby triggering treatment to standards based on the performance of best demonstrated available technology, which can be very expensive. 62 FR at 26059, May 12, 1997, and other sources there cited.[4] In these circumstances, a treatment variance can provide an intermediate option of more aggressive remediation, which may include substantial treatment of the removed waste before disposal of that treatment residue—a net environmental benefit over leaving untreated waste in place. 61 FR at 55720–22, May 12, 1997. In EPA's experience, this situation often occurs when BDAT treatment would require that wastes be treated to achieve constituent concentrations that fall below protective site-specific cleanup levels, thus increasing remediation costs for treatment of excavated wastes. In these instances, EPA has indicated that consideration of a treatment variance is typically warranted (because imposition of the otherwise applicable treatment standard would discourage aggressive remediation and is, therefore, inappropriate) and that, if a variance is approved, protective, site-specific cleanup levels may be used as

[1] EPA is also restoring language to 40 CFR 268.44(a) and (h) that was inadvertently deleted when EPA proposed this clarification and redrafting the introductions to both provisions. These changes are made to restore the inadvertently deleted text and to make the difference between national and site-specific variances more clear, as follows. The 40 CFR 268.44(a) national variance is waste-specific—it could apply to the same type of waste at numerous sites. National variances are obtained by petitioning the Administrator and, as set out in 40 CFR 268.44(b), petitions are processed using the procedures set out in 40 CFR 260.20. The 40 CFR 268.44(h) variance is site-specific—it applies only to a certain waste generated at a particular site. Site-specific variances are obtained by petitioning the Administrator, or the Administrator's delegated representative, or an authorized state. Petitions for site-specific variances are processed on a site-by-site basis and are not required to be processed using the procedures set out in 40 CFR 260.20. Further explanation on this issue is included in the Response to Comments Document for today's action in the response to comments submitted by the Department of Energy. EPA regards the restoration of inadvertently deleted language and the associated clarifications as a technical correction and may, thus, make the changes immediately in this final rule.

[2] Although it should also be noted that it is often routine and obviously appropriate to combust organic-contaminated hazardous wastes and to stabilize the combustion residues to reduce metal mobility; see, e.g. treatment standards for F024 wastes in 40 CFR 268.40.

[3] Examples are where wastes can remain within an "area of contamination", where remedy selection requirements allow a balancing of treatment and containment strategies and where RCRA regulations allow the option of closing a regulated unit with wastes left in place.

[4] Another recent example of such a treatment variance was granted to Dow Chemical Co. by EPA Region V. In this case, the company could legally leave wastes within an area of contamination but requested instead that the wastes be exhumed for more secure disposal in a subtitle C landfill. Viewing this as a net environmental benefit, and further finding that no other treatment but combustion was available to reduce the relatively low levels of hazardous constituents (chlorinated dibenzo-dioxins and furans), the Region found the existing treatment requirement inappropriate and granted the variance. Treatment Variance for Dow Chemical Co., June 10, 1997, Response to Comment Document pp. 15–17.

alternative LDR treatment standards. See recent EPA guidance on LDR treatment variances: Jan 8, 1997 memorandum, "Use of Site-Specific Land Disposal Restriction Treatability Variances Under 40 CFR 268.44(h) During Cleanups" from Michael Shapiro, Director EPA Office of Solid Waste and Steve Luftig, Director EPA Office of Emergency and Remedial Response and information on compliance with statutory provisions for LDR treatment, below. In addition, see "Hazardous Waste: Remediation Waste Requirements Can Increase the Time and Cost of Cleanups" U.S. General Accounting Office, GAO/RCED-98-4, October 1997.

EPA is accordingly codifying qualifying language stating that treatment variances can be granted where the underlying standard is not appropriate either because it is technically inappropriate or because requiring LDR treatment is environmentally inappropriate in that it could discourage aggressive remediation.

Finally, it must be remembered that this amended rule does not command issuance of treatment variances any more than the existing rule does. Like the existing rules, the amended rules set out circumstances when treatment variances may be considered. The actual determination of whether an otherwise applicable LDR treatment standard is "unachieveable" or technically or environmentally "inappropriate" is a fact-specific determination depending largely on site-and waste-specific circumstances.

B. Compliance With Statutory Provisions for LDR Treatment

As stated in the proposal all treatment variances must be consistent with the root requirement of RCRA section 3004 (m): that treatment be sufficient to minimize threats to human health and the environment posed by land disposal of the waste. See 62 FR at 26060/1, May 12, 1997 ("alternative treatment standards [established by a treatment variance] must comply with the statutory standard of RCRA section 3004(m) by minimizing threats to human health and the environment"). In order to ensure that there is no ambiguity over application of this requirement in the context of alternative LDR treatment standards developed through the treatment variance process, EPA is adding regulatory language that explicitly requires the decision-maker to determine that a revised treatment standard is sufficient to minimize threats posed by land disposal. Cf. 61 FR at 55721, October 23, 1996 (finding that alternate standard in treatment variance does minimize threats posed by land disposal). In making this determination, however, EPA (or authorized State) may consider risks posed by land disposal not only of the treated residue, but also the risks posed by the continuation of any existing land disposal of the untreated waste, that is, the risks posed by leaving previously land disposed waste in place. Thus, for example, in a remediation setting, it is appropriate (and likely necessary) to consider risks posed by leaving previously land disposed waste in place as well as risks posed by land disposal of the waste after it is removed and treated. Cf. 61 FR at 55721, October 28, 1996 (fact-specific determination that threats posed by land disposal are adequately minimized when treatment variance will lead to clean closure of large surface impoundment, substantial treatment of removed waste, and disposal of treatment residue in a subtitle C landfill) and 61 FR at 18808, April 29, 1996, and other sources cited therein (determination that the policy considerations which argue for BDAT as the basis for technology-based standards for as-generated wastes do not always support a BDAT approach in the remediation context).

In addition, when making a determination as to whether the statutory provisions for LDR treatment have been satisfied, EPA may, of course, condition any particular variance to apply only in certain circumstances if the facts warrant. There is, at least, one potentially recurring circumstance when such conditioning may be warranted for treatment variances. Under current regulation, hazardous waste-derived products can be used in a manner constituting disposal provided the waste meets the LDR treatment standards. 40 CFR 266.23. The exemption was premised on findings that hazardous wastes would meet requirements reflecting rigorous treatment which typically destroys, removes, or immobilizes hazardous constituents to the limit of available technology. 53 FR at 31198, August 17, 1988. In order to ascertain whether this exemption is still justifiable for wastes which receive treatment variances on the ground that the treatment standard is inappropriate, EPA is noting that as part of a determination of whether threats are minimized under the circumstances, consideration should be given to whether this exemption should continue to apply.[5] This would entail a fact-specific determination, and notice as to how the determination might be made would have to accompany each such treatment variance. For example, in situations where the decision-maker determines that use of a product derived from hazardous waste in a manner constituting disposal would likely not be adequately protective even if that hazardous waste derived product complied with an alternative land disposal treatment standard established through a treatment variance, the treatment variance approval could include a condition that restricted use of the treated hazardous waste in a manner constituting disposal.

EPA also notes that the Subpart CC rules, relating to control of air emissions from tanks, containers, and surface impoundments managing hazardous waste, state that if a waste has met the LDR treatment standard set out in 40 CFR 268.40 (the generally-applicable treatment standards, normally the Universal Treatment Standards), the waste is not subject to further Subpart CC controls.[6] See 40 CFR 264.1082 (c) (4) and 265.1082 (c) (4)) and 61 FR at 59941, November 25, 1996. The limitation to wastes that have achieved the generally-applicable treatment standard in fact means that the exemption is unavailable to wastes receiving treatment variances that alter the generally-applicable standards for organic hazardous constituents. EPA is confirming here that this literal reading is intentional.

III. Responses to Comment

Most comments supported the Agency's proposal, or suggested that there was no need to clarify the standard in the existing rule. The main negative comment came from the Environmental Defense Fund, raising a number of points.

First, the commenter argued that the Agency's own closure rules for impoundments create the environmentally adverse incentive to leave wastes in place and thus create the dilemma to adopt alternative treatment standards. The comment urges

[5] As EPA explained in the May 12, 1997, **Federal Register** notice, however, remediation activities involving replacement of treated soils or other wastes onto the land is not a type of use constituting disposal. The activity is a type of supervised remediation, and is not the type of unsupervised recycling activity covered by the use constituting disposal provisions. 62 FR at 26063, May 12, 1997.

[6] It should be noted that the Subpart CC standards do not apply to waste management units used solely for on-site treatment or storage of hazardous waste that is generated as the result of remedial activities required by RCRA corrective action authorities, CERCLA authorities, or similar Federal or State authorities. See 40 CFR 264.1080 (b) (5) and 265.1080 (b) (5).

amendment of the closure standards for impoundments.

While it is correct that the closure rules for surface impoundments (and landfills) create more opportunities to close with wastes left in place than do closure standards for tanks, piles, containment buildings, and drip pads, EPA did not, and is not, reopening any of the closure standards in this proceeding.[7] In developing the standards for closure of surface impoundments, EPA allowed the option of leaving wastes in place because of the practical difficulties of removing large volumes of waste from impoundments, many of which had been operating over long periods of time, and the recognition that, when properly capped, some former surface impoundments can safely contain wastes during and after post-closure care. 47 FR at 32320 and 32321, July 26, 1982. EPA also required, in the closure performance standards, that releases must be minimized or controlled at units where waste is left in place. 47 FR at 32320 and 32321, July 26, 1982. In situations where such minimization or control is not achievable, the closure performance standard would not be met and closure with waste in place would not be available under the regulations. In these respects, EPA's closure regulations for surface impoundments are identical to those for landfills, where waste is purposefully disposed of in the land-based units. EPA is re-evaluating the relationship between requirements for closure of regulated units, including surface impoundments, and requirements for RCRA corrective action and will take this comment under consideration during the re-evaluation. In the meantime, the Agency nevertheless intends to act now in order to assure that the treatment variance option continues to provide a potential intermediate alternative between full removal of waste followed by treatment to the extent of best demonstrated technology on the one hand and no waste removal at all on the other.

Second, the commenter argued that the circumstances under which treatment variances could be approved based on the "inappropriate" standard were not adequately defined. The commenter then went on to note that most of the situations in which the Agency contemplated using the "inappropriate" standard occurred in the remediation setting and suggested that the Agency either wait until completion of the ongoing rulemaking relating to management of contaminated environmental media, or limit the scope of the variance to remediation situations.[8]

EPA has addressed the comments regarding the specificity of the "inappropriate" standard by adding clarifying language, based on discussion in May 12, 1997 proposal, to the final regulations as discussed above. Regarding the second part of this comment, EPA does not believe it should await the outcome of the HWIR-Media proceeding to finalize the clarifying amendment to the treatment variance rules. EPA also notes that nothing in this rule forecloses any of the actions proposed in the HWIR Media proposal, including further definition of situations where treatment variances are appropriate—for example, codification of the type of "minimize threat" variance determination discussed in the HWIR-Media proposal. 61 FR at 18810–18812, April 29, 1996. The Agency is continuing to evaluate and review comments on this part of the HWIR-Media proposal.

The Agency is persuaded by the commenter's observation regarding use of treatment variances in the context of remediation. Accordingly, in response to this comment, EPA has chosen to expressly limit approval of treatment variances using the "environmentally inappropriate" test to remediation wastes. In this context, remediation waste includes all solid and hazardous wastes and all media (including groundwater, surface water, soils and sediments) and debris, which contain listed hazardous waste or which themselves exhibit a hazardous waste characteristic when such wastes are generated during remediation, such as RCRA corrective action, CERCLA cleanup, and cleanup under a state program. This definition is consistent with the existing definition of remediation waste in 40 CFR 260.10 except that it is not limited to wastes generated for purposes of corrective action under 40 CFR 264.101 or RCRA Section 3008(h). Since site-specific land disposal restriction treatment variances will undergo review and approval by either EPA or an authorized state, EPA does not believe it is necessary to limit the eligible wastes to corrective action cleanups.

Finally, the commenter went on to argue that the open-ended proposal effectively reopened the question of whether site-specific treatment variances (40 CFR 268.44 (h)) could be issued without going through notice-and-comment rulemaking, the argument being that each such variance would establish a new criterion for what "not appropriate" means.

Site-specific treatment variances can be granted without using rulemaking procedures. 53 FR at 31199–31200, August 17, 1988. EPA did not reopen this issue in this proceeding, which just is adopting clarifying amendments which reflect EPA's longstanding practice and interpretation of the treatment variance rules. 62 FR at 26059, May 12, 1997. However, to ensure there is no ambiguity over the application of treatment variances, EPA is restoring language to 268.44(h) indicating that the alternative LDR treatment standards established through the treatment variance process are site-specific. This language has always been part of 268.44(h) and was inadvertently omitted in the proposal of this clarifying rule. In any case, the amendment adopted today contains explicit qualifying language so that whatever basis, if any, existed for the commenter's argument is no longer present.

The same commenter, in oral conversations with Agency officials as well as in public comments, maintained the importance of allowing opportunity for public participation whenever a site-specific treatment variance is being considered. These opportunities are already provided. The Agency stated in 1988, when adopting 40 CFR 268. 44(h), "[t]he Agency agrees as a matter of policy to allow opportunity for public notice and comment prior to granting a nonrulemaking variance from the treatment standard. Because circumstances under which one might apply for a site-specific variance vary, vehicles for public comment will be specified on a case-by-case basis." 53 FR at 31200, August 17, 1988. In response to this commenter's concerns, however, EPA has decided to indicate in the rule that opportunity for public participation must be provided when granting or denying any site-specific treatment variance. In doing so, the Agency is simply repeating in the rule what it wrote in the August 1988 preamble. The Agency does not view this step as creating a new regulatory requirement or altering existing practice and, by adding the August 1988 preamble language to the rule, is not intending to

[7] The rules for most regulated units in essence require clean closure, with wastes being allowed to be left in place only after a showing that wastes remaining after initial removal and decontamination cannot be practically removed or decontaminated. See e.g., closure standards for piles in 40 CFR 265.258. The closure rules for impoundments and landfills do not contain these provisions, but rather provide alternative standards for closing with wastes in place or for clean closure. See, e.g., 40 CFR 265.228.

[8] EPA proposed regulations addressing contaminated media at 61 FR 18780, April 29, 1996 and has not yet taken final action on this proposal.

reopen the issue (settled in 1988) of whether site-specific treatment variances can be approved or denied without going through rulemaking procedures.

IV. Withdrawal of Citgo Treatment Variance

EPA granted a treatment variance to Citgo Petroleum on October 28, 1996 for wastes presently disposed in a large surface impoundment awaiting closure. 61 FR 55718, October 28, 1996. Because the company had the legal option of closing the impoundment with waste in place (assuming the technical standards for such closure could be justified), and was virtually certain to pursue that option if treatment of the waste to the limit of best demonstrated technology was required, EPA found that it was an environmentally superior result to assure clean closure and partial treatment. *Id.* at 55721. The variance was in essence used as an incentive to assure aggressive clean closure and the associated waste treatment. EPA, as part of the May 12 notice, proposed to reissue the variance under the clarified regulatory standard. 62 FR at 26062–26061, May 12, 1997.

Since the variance was granted, Citgo has chosen to pursue the legal option of seeking to close the impoundment with waste left in place. Because of Citgo's decision, EPA believes there is no longer any basis for the Citgo treatment variance. If the company's application for closure in place is granted, the variance is moot. If the application is not granted, then the company will have to clean close the impoundment and it will not be necessary to use the variance to create a voluntary incentive for them to do so. Thus, in either case, the basis for granting the variance no longer exists. Accordingly, EPA is withdrawing the Citgo treatment variance in today's Notice. Citgo is aware of the Agency's thinking, has discussed the issue with EPA, and agrees not to oppose withdrawal of the variance.

V. State Authorization

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized States have primary enforcement responsibility. The standards and requirements for authorization are found in 40 CFR part 271.

Today's rule is being promulgated pursuant to section 3004(m) of RCRA (42 U.S.C. 6924(m)), a provision added by HSWA.[9] Therefore, the Agency is adding today's rule to Table 1 in 40 CFR 271.1(j), which identifies the Federal program requirements that are promulgated pursuant to HSWA. States may apply for final authorization for the HSWA provisions in Table 1, as discussed in the following section of this preamble.

EPA originally indicated that states could not be authorized to review and approve national treatment variances pursuant to 40 CFR 268.44(a) because such variances could result in nationally-applicable standards for a new waste treatability group. 52 FR at 25783, July 8, 1987. In the HWIR-Media proposal, EPA clarified that states could seek authorization to review and approve site-specific treatment variances pursuant to 40 CFR 268.44(h). 61 FR at 18828, April 29, 1996.

The site-specific variance provision is less stringent than the generally applicable LDR program (i.e., the underlying treatment standard from which a variance is sought). Since today's final rule clarifies the existing regulations, for authorization purposes it is considered as stringent as, but no more stringent than the existing site-specific variance regulations. Thus, states are not required to adopt regulations equivalent to 268.44(h) either in its current form or in the clarified form promulgated today. Although States are not required to adopt regulations for site-specific LDR treatment variances, EPA strongly encourages States to adopt and become authorized for the clarified standards established today and is committed to expediting the state authorization process for this rule. In the meantime, EPA will continue to review and approve (as appropriate) treatment variance applications in all States.

VI. Regulatory Requirements

A. Regulatory Impact Analysis Pursuant to Executive Order 12866

Executive Order No. 12866 requires agencies to determine whether a 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 considers 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 clarifies and codifies, in regulatory language, existing EPA standards for the application of a treatability variance where the treatment standard is not appropriate for the restricted waste subject to the standard. Thus, because today's rule clarifies and codifies existing EPA interpretation of the treatability variance provision, no incremental costs are associated with this rulemaking.

B. Regulatory Flexibility Analysis

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 [SBREFA]) whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant adverse economic impact on a substantial number of small entities.

SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. The following discussion explains EPA's determination.

EPA has codified regulatory language in today's rule that petitioners of restricted wastes that wish to obtain a treatment variance do not have to show technical infeasibility when the treatment technology is not appropriate to the waste. This regulatory language clarifies long standing and current Agency interpretation of the 268.44 that the two tests of technical infeasibility and inappropriateness are independent.

[9] Under RCRA section 3006(g) (42 U.S.C. 6926(g)), new requirements and prohibitions imposed by HSWA take effect in authorized states at the same time that they take effect in unauthorized states. EPA is directed to carry out these requirements and prohibitions in all states, including the issuance of permits, until the state is granted authorization to do so.

(See above discussion and 61 FR 55718 at 55720–21, October 28, 1996; 53 FR at 31200, August 17, 1988; 55 FR 8666 and 8760, March 8, 1990; 61 FR 18780 and 18811, April 29, 1996.) Because this regulatory language codifies existing EPA interpretation of current regulations, it imposes no costs or economic impacts on small entities applying for treatability variances.

Because this clarification does not impose an adverse economic impact to any small entity that is either generator of restricted waste or an owner/operator of a treatment, storage or disposal facility managing such waste that is petitioning the Agency for a variance from the treatment standard, I hereby certify that this rule will not have a significant adverse economic impact on a substantial number of small entities. This rule, therefore, does not require a regulatory flexibility analysis.

C. 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.

Because this regulatory language codifies current EPA interpretation of existing treatability variance language and thus imposes no costs, EPA 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. EPA has fulfilled the requirement for analysis under the Unfunded Mandates Reform Act.

D. 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).

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: December 1, 1997.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter 1 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 268.44 is amended to revise paragraphs (a) and (h), add paragraph (m), and remove paragraph (p) as follows:

§ 268.44 Variance from a treatment standard.

(a) Based on a petition filed by a generator or treater of hazardous waste, the Administrator may approve a variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

* * * * *

(h) Based on a petition filed by a generator or treater of hazardous waste, the Administrator or his or her delegated representative may approve a site-specific variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(3) Public notice and a reasonable opportunity for public comment must be provided before granting or denying a petition.

* * * * *

(m) For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to 40 CFR 266.20 through 266.23.

* * * * *

[FR Doc. 97–31914 Filed 12–4–97; 8:45 am]
BILLING CODE 6560–50–P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 8 1997

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Use of Site-Specific Land Disposal Restriction Treatability Variances Under 40 CFR 268.44(h) During Cleanups

FROM: Michael Shapiro, Director
Office of Solid Waste

Steve Luftig, Director
Office of Emergency and Remedial Response

TO: RCRA/CERCLA Senior Policy Managers
Regions I - X

This memorandum encourages appropriate use of site-specific land disposal restriction (LDR) treatability variances under 40 CFR § 268.44(h) for contaminated soils and other materials managed during cleanups. In particular, this memorandum clarifies the minimum requirements for alternative treatment standards and outlines treatability variance procedures. It builds on Superfund LDR Guides 6A and 6B, "Obtaining a Soil and Debris Treatability Variance for Remedial Actions and Obtaining a Soil and Debris Treatability Variance for Removal Action," publication numbers 9347.3-06FS and 9347.3-0B6FS, September 1990 and the quick reference fact sheet "Regional Guide: Issuing Site-Specific Treatability Variances for Contaminated Soils and Debris from Land Disposal Restrictions," publication number 9380.3-08FS, January 1992.

LDR Applicability

The Hazardous and Solid Waste Amendments (HSWA), enacted November 8, 1984, largely prohibit land disposal of hazardous wastes. After a waste is prohibited from land disposal the statute provides two options: comply with a specified treatment standard designed to minimize threats to human health and the environment prior to land disposal or dispose of the

waste in a "no migration" unit.[1] Land disposal includes any placement of hazardous waste into a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave. See, RCRA Section 3004(k).

Since 1984, EPA has developed LDR treatment standards for all hazardous wastes listed or identified at the time HSWA was enacted and many hazardous wastes that have been subsequently listed or identified (e.g., the new toxicity characteristic (TC) wastes). The Agency recognizes, however, that in some cases these generally applicable LDR treatment standards will be unachieveable or inappropriate. When a generally applicable LDR treatment standard is unachieveable or inappropriate, a site-specific LDR treatability variance offers an opportunity to comply with LDRs through development of an alternative standard based on site- and waste-specific characteristics. The Agency's longstanding policy is that site-specific treatability variances are generally appropriate for contaminated soils; they also may be appropriate for other wastes encountered during site cleanups. See, e.g., 55 FR 8666, 8760-8761 (March 8, 1990); 58 FR 48092, 48125 (September 14, 1993); 61 FR 18805-18808, 18810-18812 (April 29, 1996); 61 FR 55717 (October 28, 1996).

It is important to note that the land disposal restrictions apply only to hazardous wastes placed after the effective date of the applicable land disposal prohibition. Not all materials managed during a cleanup action are hazardous wastes and not all activities conducted during a cleanup action constitute placement. For example, EPA has interpreted placement to include putting hazardous waste into a land-disposal unit, moving hazardous wastes from one land-disposal unit to another, and removing hazardous waste from the land, managing it in a separate unit, and re-placing it in the same or a different land-disposal unit. Placement does not occur when hazardous waste is consolidated within a land-disposal unit, when it is treated *in situ*, or when left in place (e.g., capped). See, e.g., 55 FR 8758-8760, (March 8, 1990).

When To Use Site-Specific Variances

Site-specific LDR treatability variances generally do not require rulemaking for approval; they are approved on a case-by-case basis in consideration of site- and waste-specific circumstances and conditions. A site-specific variance may be approved when the properties of the waste at issue are physically or chemically different from the properties of the wastes evaluated in establishing the generally applicable treatment standard and, as a result, the generally applicable standard cannot be achieved. A site-specific variance may also be approved when the generally applicable treatment standard is based on a Best Demonstrated Available Technology (BDAT) that is inappropriate for the waste in question. See, 268.44(h) and 61 FR 55717 (October 28, 1996).

---

[1] *A no migration unit is a unit from which there will be no migration of hazardous constituents for as long as the* waste placed in the unit remains hazardous. See, RCRA Sections 3004(d), (e), (g)(5).

Common cleanup situations which may prompt consideration of a site-specific treatability variance include:

- *Cleanup of contaminated soils where the generally applicable land disposal treatment standards are based on combustion.* For large quantities of contaminated soils with relatively low concentrations of hazardous constituents, EPA generally considers treatment standards based on combustion inappropriate.

- *Cleanups where bench or pilot scale studies indicate that the generally applicable land disposal treatment standard cannot be achieved.*

- *Cleanup of old sludges initially placed prior to the effective date of land disposal prohibitions.* In some cases the physical or chemical composition of sludges become significantly altered upon prolonged exposure to: natural sunlight, acidic rainfall, weather cycles (such as freeze-thaw) and intrusion, commingling, or chemical reaction with rainfall, soil, windblown dirt and/or other co-disposed wastes. These types of exposure can result in changes in composition through: evaporation or migration of volatiles, sunlight induced polymerization of organics, lime stabilization (i.e., self-cementation), photodegradation, natural biodegradation, hydrolysis, and even electrolytic oxidation/reduction reactions. As a result, weathered sludges often no longer have the physical or chemical composition of newly generated sludges and a treatability variance may be warranted.

- *Cleanups where, due to site-specific circumstances, compliance with the generally applicable land disposal treatment standard would result in a net environmental detriment, for example, by discouraging cleanup.* In some situations, legal and protective cleanup alternatives involve the choice between remedies that require compliance with LDR treatment standards developed for as-generated wastes and remedies that do not (i.e., remedies that rely on containment). When application of the generally applicable treatment standard provides an incentive for remedies that, while permitted under applicable law, are less aggressive (and, potentially, less protective over the long term) than alternatives, the generally applicable standard may be considered inappropriate. Note, many of these remedies will include some form of treatment; however, it might not be the treatment prescribed for as-generated wastes. See, e.g., 61 FR 55717 (October 28, 1996) where EPA approved alternative treatment standards, in part, because imposing the otherwise applicable standards would have resulted in a net environmental detriment.

Alternative Treatment Standards

All alternative LDR treatment standards must satisfy the statutory requirement of RCRA 3004(m) by minimizing threats to human health and the environment. In many situations, protective, risk-based, site-specific cleanup standards established in the context of an Agency-overseen cleanup will meet this "minimize threat" standard and may be used as alternative treatment standards. In other situations, alternative treatment standards may be established on a technology basis.[2]

Risk-based alternative treatment standards established in the context of an Agency-overseen cleanup should consider EPA guidance on risk-based cleanup standards. EPA has interpreted protective cleanup standards to include risk-based media cleanup standards that are within the 10^{-4} to 10^{-6} risk range for carcinogens and result in a hazard index of one or less for constituents with non-carcinogenic effects. Protective, risk-based, site-specific cleanup standards can be based on generally available constituent concentration standards (e.g., MCLs and many state cleanup standards) or they may be developed for an individual site (e.g., through a site-specific risk assessment). Alternative treatment standards established on a technology basis are most often based on site-specific treatability data or on a "substantial treatment" standard. For example, 90 per cent reduction in constituent concentrations is generally considered substantial treatment.

For contaminated soils, the Superfund LDR Guides 6A and 6B, "Obtaining a Soil and Debris Treatability Variance for Remedial Actions and Obtaining a Soil and Debris Treatability Variance for Removal Action," publication numbers 9347.3-06?S and 9347.3-0B6?S, September 1990 provide suggested constituent concentration ranges and per cent reduction targets that may be used as guidance when establishing alternative LDR treatment standards for contaminated soils.[3] When using the constituent concentration ranges or per cent reduction targets from the 6A/6B guidance, the Agency should be prepared to support application of these standards on a site-specific basis. As with application of any Agency guidance, application of the constituent concentration ranges or per cent reduction targets from the 6A/6B guidance could be questioned by facility owners/operators or by the public; the Agency must be prepared to respond to these comments and justify application of any guidance to site- and waste-specific

---

[2] The ability to, as appropriate, use site-specific, risk-based cleanup levels as alternative LDR treatment standards does not affect the Agency's other remedial expectations, for example, that treatment will be used to address the principal threats posed by a site whenever practicable.

[3] Note that protective, risk-based cleanup standards that are developed based on site-specific conditions may be either higher or lower than the constituent concentration ranges or per-cent reduction targets from the 6A/6B guidance. In addition, while debris are still eligible for site-specific treatability variance, such variances are no longer presumed to be appropriate. LDR treatment standards specific to debris were promulgated August 18, 1992 (57 FR 37194).

circumstances.

Constituents Subject to Treatment

Unless the generally applicable LDR treatment standard will be met, alternative treatment standards must be set for each constituent subject to treatment. Constituents subject to treatment are, for listed wastes, the constituents for which treatment standards are specified in 40 CFR 268.40 and, for characteristic wastes, the characteristic constituent and any underlying hazardous constituents present at concentrations greater than the Universal Treatment Standards (UTS) specified in 40 CFR 268.48. For example, a waste that fails the toxicity characteristic leaching test for benzene but also contains other organic hazardous constituents such as toluene, ethyl benzene, and xylene must meet treatment standards for both the benzene and the other hazardous constituents.[4] Note that, when testing characteristic waste to determine constituents subject to treatment, individuals do not necessarily have to test for every constituent with a universal treatment standard; they may limit testing to constituents that are reasonably expected to be present.

Multiple Contaminants

It is not automatically necessary to treat all constituents subject to treatment in order to satisfy RCRA Section 3004(m). Just as some industrial wastes are generated with concentrations of constituents subject to treatment that are below the applicable land disposal treatment standards, some wastes generated during cleanup may contain concentrations of hazardous constituents that are below land disposal treatment standards established in a site-specific treatability variance. It is common for cleanup wastes to contain mixtures of many different kinds of hazardous constituents at widely varying concentrations. Often, these combinations of constituents or constituent concentrations are different from the constituents combinations and concentrations typically found in as-generated wastes that carry the same waste code or exhibit the same hazardous characteristic and treatment of all constituents subject to treatment may not be required to satisfy RCRA Section 3004(m).

In some of these cases, a treatability variance might establish alternative treatment standards for some constituents subject to treatment, but not others (i.e., compliance with the otherwise applicable treatment standard might be required for some constituents). In other cases, a treatability variance might require treatment to meet alternative LDR treatment standards for some constituents subject to treatment while for others it might be determined that no treatment is necessary to comply with LDRs. For example, a waste might be characteristic for benzene and

---

[4] Note, extending the obligation to treat for underlying hazardous constituents to TC metal waste was discussed in 60 FR 43654, August 22, 1995. The proposal has not been finalized.

contain low levels of toluene, ethyl benzene, or xylene. Depending on the concentrations of the individual constituents, treatment might be required for the benzene, and protective, risk-based alternative treatment standards for the minor contaminants might be established such that treatment to comply with LDR standards was not required (i.e., where the initial constituent concentrations are at or below the risk-based standard). Similarly, a cleanup waste might fail the toxicity characteristic leaching test for a metal contaminant and also contain low levels of organic contaminants. Treatment to the generally applicable LDR treatment standards might be required for the TC metal, but protective, risk-based alternative LDR treatment standards for the organics might be established at or above the initial constituent concentrations, making treatment of the organics unnecessary.[5]

Variance Procedures

In states authorized to issue site-specific LDR treatability variances, applications should be submitted to the state hazardous waste program director, or other official designated by the state. In states that are not authorized to issue these variances, applications should be submitted to the EPA Regional Administrator or to the appropriate delegated official within the Region. All applications should include information required by 40 CFR 260.20(b)(1) - (4) and information documenting compliance with the waste analysis requirements of 40 CFR 268.7.

Applications for site-specific LDR treatability variances will likely require less detail and rigorous analysis than applications for generically applicable variance (e.g., rulemaking variances under 268.44(a)); however, if necessary EPA can use 40 CFR 268.44(j) to request additional information to support a given application. All approvals should emphasize that the variances are site- and waste-specific in nature and do not apply to any other site or waste.

Whenever possible, the decision to approve a site-specific LDR treatability variance should be integrated into other cleanup decision documents (e.g., RCRA Statement of Basis, CERCLA Record of Decision, state corrective action order). As a matter of Agency policy, site-specific LDR treatability variances should undergo public notice and opportunity for comment before approval. See, 53 FR at 31200 (August 17, 1988). Similar to the decision to approve a variance, whenever possible, public notice and opportunity for comment for site-specific LDR treatability variances should be combined with other public notice and opportunity for comment activities that occur during Agency-overseen cleanups (e.g., the public notice and opportunity for comment associated with a CERCLA proposed plan or approval of a corrective action remedy). In the limited circumstances where it is not possible to combine public notice for site-specific LDR treatability variances with other public notice opportunities, public notice and opportunity for comment should be provided consistent with the program goals of full, fair and equitable

[5] See footnote 4.

public participation. While a variance application is pending the applicant must comply with all applicable land disposal restrictions and requirements (40 CFR 268.44(l)).

As discussed in the National Contingency Plan (55 FR 8760-8762) and the Superfund LDR 6A and 6B guides, EPA presumes that site-specific LDR treatability variances may be granted for contaminated soils; therefore, applications for a site-specific LDR treatability variance for soil do not have to document that the generally applicable LDR treatment standards are unachievable or inappropriate.[6] However, applicants should include information documenting the basis for their application supporting application of the soil presumption to their site- and waste-specific circumstances. Applications for site-specific LDR treatability variances that address cleanup wastes other than soil should include information documenting that either (1) the waste at issue is significantly different from the waste evaluated for the generally applicable treatment standard and, as a result, the regulated constituents cannot be treated to the specified levels or (2) the generally applicable standard is based is not appropriate. Applications should include a statement, signed by the applicant, certifying that the information in the application is true and correct.

Delegation

The authority to approve site-specific LDR treatability variances for contaminated soils was delegated to Regional Administrators in Delegation 8-45-B. For CERCLA removal actions and actions under the solid waste disposal act (which includes RCRA), the authority can be further delegated to regional Division Directors. The authority to approve site-specific LDR treatability variances for one-time only cleanup wastes (non-soil or debris wastes, i.e., sludges managed as part of a cleanup) is under consideration for delegation to Regional Administrators. (See proposed delegation 8-45-C.)

While the authority to approve site-specific LDR treatability variances will rest with the Regions and states, we encourage you to work together and with EPA Headquarters to maintain a national dialogue on variance issues. In particular, we request that Regions (and authorized states) share information on critical or precedent setting variances so we can all benefit from your experiences and so we can assure that issues of national scope or consistency are equitably resolved. This information could be shared at national and regional meetings or through other networking opportunities.

---

[6] Of course, if a commenter on any given site-specific treatability variance challenges the presumption, the Agency must address these comments on a site-specific basis, for example, by articulating the site-specific conditions that support the presumption, in response.

State Authorization

EPA has recently clarified its policy on state authorization for site-specific LDR treatability variances and is actively encouraging states to seek authorization for and integrate appropriate use of these variances in their cleanup programs. See, 61 FR18828 (April 29, 1996). Additional information on state-authorization will be provided in an upcoming update to the State Program Advisory.

Disclaimer

This document provides guidance to EPA and State personnel on how to best implement RCRA and EPA's regulations on site-specific treatability variances to facilitate appropriate use of these variances, especially as part of Agency-overseen cleanups. It also provides guidance to the public and the regulated community on how EPA intends to exercise its discretion in implementing these regulations. This document does not, however, substitute for EPA's regulations, nor is it a regulation itself. Thus, it cannot impose legally binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based on specific circumstances. EPA may change this guidance in the future, as appropriate.

Summary/Additional Information

Site-specific LDR treatability variances are an important tool to ensure compliance with appropriate LDR treatment standards. They can be especially useful where application of the generally applicable standard can serve as a disincentive towards aggressive cleanup. We encourage you to continue to integrate site-specific LDR treatability variances into your cleanup activities and to support the use of these variances into state programs. For additional information, please contact Elizabeth McManus or Shaun McGarvey at (703) 308-8657 and (703) 308-8603, respectively.

cc: Jim Berlow, OSW
Susan Bromm, OSRE
Elizabeth Cotsworth, OSW
Matthew Hale, OSW
Peter Neves, OSRE
David Nielsen, OER
Bruce Means, OERR
Dawn Messier, OGC
Larry Reed, OERR
Steve Silverman, OGC
Larry Starfield, OGC

Jim Thompson, ORE
Jim Woolford, FFRRO
Regional RCRA Branch Chiefs
Regional CERCLA Branch Chiefs
Tom Kennedy, Association of States and Territorial Solid Waste Management Officials

federal register

Monday
April 29, 1996

Part II

Environmental Protection Agency

40 CFR Part 260, et al.
Requirements for Management of Hazardous Contaminated Media; Proposed Rule

and would not go into effect unless and until a State adopted and became authorized for them. Normally, less stringent HSWA requirements automatically take effect in non-HSWA authorized States. However, the Part 269 LDR treatment requirements would not take effect because they apply only to cleanup wastes addressed under a Part 269 program. Thus, they would become effective in non-HSWA authorized States only when such States obtain authorization to run a Part 269 program. States authorized for the LDR program that choose to obtain HWIR-media authorization, would have to adopt requirements that would be at least as stringent as the LDR requirements specified in Part 269. States that seek LDR authorization after promulgation of final HWIR-media regulations would have to adopt requirements no less stringent than the existing (non-Part 269) Federal LDR program, if they chose not to seek authorization for today's HWIR-media requirements.

Media treatment variances. Under current regulations at 40 CFR 268.44, EPA may grant waste- or site-specific variances from treatment standards in cases where it can be demonstrated that the treatment standard is inappropriate for the waste, or that the waste cannot be treated to specified levels, or treated by specified methods. Today's proposed rule would retain the availability of treatment variances in the implementation of the HWIR-media program, and establish HWIR-media specific treatment variance procedures for media managed under Part 269. The Agency is clarifying today that States could seek authorization for both the site-specific treatment variance procedures in 40 CFR 268.44, and the HWIR-media specific treatment variance procedures proposed in Part 269. EPA is aware that some States, especially States that chose to adopt the Federal LDR program by reference, could have already received authorization to issue site-specific LDR treatment variances under 40 CFR 268.44. Because there has been some confusion about this issue, and because EPA's current proposal would encourage States to become authorized for treatment variances, EPA requests the States to note in their HWIR-media program revision application, or other authorization application, or in official correspondence, whether or not they believe that they have been authorized for site-specific LDR treatment variances under 40 CFR 268.44. EPA would then evaluate that aspect of a State submittal to confirm the State's authorization for treatment variances. EPA requests comments on this proposal, especially from States that believe they are already authorized to approve LDR treatment variances.

CAMU revocation. EPA is proposing today to revoke the CAMU regulations at 40 CFR 264.552 and to "grandfather" CAMUs approved prior to the publication date of the final HWIR-media rule. Since revocation of the CAMU regulations would remove that option at the Federal level, even States that have adopted CAMU regulations as a matter of State law and/or become authorized for CAMUs would be blocked from approving new CAMUs by this date, when these more stringent Federal rules would go into effect. Of course, States could still use their CAMU regulations for non-hazardous wastes at their discretion, or for media that do not contain hazardous wastes (and that are not subject to LDRs).

In order to ensure that requirements for "grandfathered" CAMUs remain enforceable, States that have already been authorized for the CAMU regulations, and that choose to grandfather CAMUs, should retain their CAMU regulations (for those grandfathered CAMUs) until those CAMUs have expired or are terminated. States would be required, however, to make clear that existing State CAMU regulations would not be used to grant any new CAMUs for management of Federally hazardous waste after the date of publication of the final HWIR-media rule.

c. Examples. The following examples illustrate the effect of today's proposed rule in authorized States.

Example One: The State has received final base program authorization but has not yet been authorized for the land disposal restriction program.

Because the State has received final base program authorization, and the pre-HSWA HWIR-media regulations proposed today are less stringent than the existing program, the pre-HSWA HWIR-media regulations would not be effective in the State unless and until the State adopted and became authorized for them.

Since EPA would still be implementing the LDR program in the State, the Part 269 LDR treatment requirements for hazardous contaminated media and treatment variances for contaminated media would be effective immediately upon approval of the State's HWIR-media program, and would be implemented by EPA until the State received the necessary LDR program authorization. On the other hand, the new remediation pile provisions would become effective immediately in non-HSWA authorized States, because they are HSWA requirements that are not specific to the Part 269 program.

Example Two: The State has received final base program authorization, and is also authorized for the land disposal restriction program through the Third Third LDR rule.

Since the State has received final authorization and the pre-HSWA HWIR-media regulations proposed today are less stringent than the existing program, the pre-HSWA HWIR-media regulations would not be effective unless and until the State adopted and became authorized for them, as discussed in example one. Similarly, since the State would be authorized for the land disposal restriction program, and the remediation pile provisions (which are considered HSWA provisions because they affect LDRs) proposed today are considered less stringent than the existing LDR program, the remediation pile provisions proposed today would not be effective in the State unless and until the State adopted and became authorized for them.

For the less stringent Part 269 treatment standards, as explained in example one, these would not become effective in the State until the State chose to adopt a Part 269 program. Because the State would already be authorized for a sufficient LDR program, the State could also be authorized to run the LDR program of the HWIR-media program.

Example Three: The State is authorized for the corrective action management unit rule.

The CAMU revocation provision proposed today is the only provision that is more stringent than the existing Federal RCRA program and, therefore, mandatory for States to adopt. In addition, because revocation of the CAMU regulations would remove that option at the Federal level, even States that have adopted CAMU regulations as a matter of State law would be blocked from implementing those regulations when more stringent Federal rules take effect (date of publication of final HWIR-media rule).

8. Request for Comment on EPA's Approach to Authorization

EPA requests general comments on the approach to authorization outlined in today's proposal. In addition, as discussed above, EPA specifically requests comments that address the following issues and areas:

a. The use of differential authorization procedures for State program revisions, and whether the Category 2 authorization procedures discussed today would sufficiently recognize the sophistication of State programs while maintaining an appropriate level of EPA review. EPA is specifically interested in the ability of these procedures to adequately address evaluation of a State's capability to implement any given program revision;

b. The effect of differential authorization procedures, if any, on State's and EPA's ability to cluster authorization applications (i.e., the ability to prepare and review program revision applications that address more than one rule at the same time);

c. Whether the Category 2 procedures discussed today would be appropriate for authorization of the HWIR-media regulations, and other types of

federal register

Wednesday
August 17, 1988

Part II

Environmental Protection Agency

40 CFR Parts 264 etc.
[OSW-FR-88-011]
Land Disposal Restrictions for First Third Scheduled Wastes; Final Rule

wastes would be indigenous to metal recovery processes. K061 wastes are generated by the same type of furnace that recovers the K061 dust, furnaces from both the steel industry and the zinc smelting industry are part of the same generic SIC code 331, and the dusts are similar in composition to the virgin ores customarily smelted in zinc smelting furnaces. Not only are the zinc levels the same as found in virgin ores (15% minimum), the other toxic metals (lead and cadmium) are also present in zinc ores in comparable concentrations. Hazardous waste K069 is even more clearly indigenous to the secondary lead smelting process since it is generated directly by the secondary lead process and contains no toxic constituents not already present in the normal feed material to the secondary lead smelting furnace.

It therefore appears to the Agency that these two hazardous wastes would be considered to be indigenous to the respective metal recovery process under any of the definitions that EPA is considering. Because it appears at this time to be clear that under any ultimate regulatory regime these wastes would be indigenous, then the derived from rule would not apply to any of the wastes generated by the metal recovery process. Consequently, the treatment standards EPA is establishing today for K061 and K069 do not apply to wastes from the metal recovery processes because, by virtue of the indigenous principle, the derived from rule would not apply to these processes (i.e., the residuals from such processes would not be derived from a hazardous waste).

K. Nonrulemaking Procedures for Site-Specific Variances from the Treatment Standard

In the November 7, 1986 final rule (51 FR 40572), the Agency established a procedure for obtaining a variance from the applicable treatment standard (40 CFR 268.44). Use of this variance was envisioned in cases where restricted hazardous wastes differ significantly from the wastes evaluated in setting treatment standards and, as a result, cannot be treated to meet the applicable treatment levels or where the technology used to establish the treatment level is not appropriate to the waste. The request for this treatability variance must demonstrate, among other things, that the waste is significantly different from the wastes evaluated in establishing the treatment standard and cannot be treated in compliance with the applicable treatment standard. Prior to today's final rule, the section 268.44 variance procedures were available only through a rulemaking that would amend the regulatory treatment standards each time a variance was granted.

Today's final rule amends § 268.44 by adding procedures for requesting a site-specific variance from the treatment standard. As explained below, opportunity will be provided for public comment on site specific variances.

1. Background

On September 5, 1986, the Agency published a Notice of Availability of Data (51 FR 31783). The notice requested comments on whether EPA should have a variance from the generally applicable treatment standards, and the procedures under which such variances should be processed. Commenters generally supported allowing variances from the treatment standard. Furthermore, in the context of today's modification, some commenters, while recognizing EPA's authority to grant variances through rulemaking procedures, supported the use of nonrulemaking procedures. Because there was insufficient time to fully consider all issues relating to the variance procedure before the November 7, 1986 rule was promulgated, only a procedure for obtaining a variance from the treatment standard which required rulemaking was established (51 FR 40572); however, the Agency noted its intention to raise the nonrulemaking variance issue in the future.

The Agency requested comment on several modifications of the variance procedure in the December 11, 1986 California list land disposal restrictions proposal (51 FR 44729). Specifically, comment was requested on the advisability of allowing nonrulemaking procedures and on the applicability of such procedures. Comment was also requested on establishing a deadline for variance applications, on provisions for public comment, and on the criteria for granting nonrulemaking variances.

Nonrulemaking variance procedures were again presented for public comment in a Notice of Availability of Data published on August 12, 1987 (52 FR 30038). It was noted that the July 7, 1987 California list final rule (52 FR 25780) set forth a treatment method equivalency petition (40 CFR 268.42) that need not be processed through a formal rulemaking in cases where the relief sought would not have generic applicability and effect. In the August 12 Notice, EPA solicited further comment on the advisability of applying the same reasoning to the site-specific variance from the treatment standard so that formal rulemaking procedures are not mandated.

2. Major Comments

The Agency received several comments addressing various aspects of establishing a nonrulemaking procedure for site-specific variances from the treatment standard. The majority of commenters supported the establishment of nonrulemaking procedures; their arguments were based on the need for streamlined procedures so that variances may be reviewed in a timely manner. Several commenters suggested that a site-specific nonrulemaking variance could be included in the permitting process, thus offering an opportunity for public comment. One commenter cited the Supreme Court's decision in *Chemical Manufacturers Association* v. *NRDC*, 470 U.S. 116 (1985), as support for EPA's authority to use a streamlined variance procedure. On the other hand, two commenters expressed concerns about utilizing nonrulemaking procedures. One commented that EPA had the authority to grant variances from the treatment standard, but stated that all petitions must be subject to public review and comment before they are granted. The other commenter strongly opposed the Agency's proposed approach, arguing that nonrulemaking procedures violate RCRA sections 3004(m), 7004, and 7006.

3. Agency Response and Summary of Today's Approach

The Agency believes that nonrulemaking procedures for the variance from the treatment standard are not precluded by the statute in cases where such a determination is site-specific, having no generic applicability and effect. The Agency is taking this position for a number of reasons. First, since a generator-specific treatability variance would not be of general applicability and effect, such administrative action would not be a rule requiring utilization of the Administrative Procedure Act informal rulemaking procedures. Second, to the extent that section 3004(m) creates an independent requirement of rulemaking procedures, this requirement is satisfied by the initial rulemaking in which the BDAT treatment standard is established. In this regard, the Agency notes that there are numerous instances where a statute requires that a generally applicable standard be established by regulation, but that variances from that standard need not be established via rulemaking. Under RCRA, for example, EPA must use rulemaking to establish generally applicable standards for treatment, storage, and disposal facilities (RCRA section 3004(a)). EPA,

however, has also established variances from certain of these generally applicable requirements which can be granted by means other than rulemaking—for example, the variance from the secondary containment requirement for hazardous waste tanks is implemented by nonrulemaking procedures. (See § 264.193 (g) and (h)). Under the Clean Water Act, EPA is required to establish generally applicable effluent limitation guidelines and standards by regulation, but for years has had in place a fundamentally different factors variance from these standards that was implemented by nonrulemaking procedures. This Fundamentally Different Factors variance is now codified in the 1987 amendments to the Clean Water Act, section 301(n). In the land disposal restrictions rules themselves, EPA adopted nonrulemaking procedures for processing demonstrations of equivalency to a specified BDAT method. (See § 268.42(b)).

In fact, it appears that at least in RCRA, where Congress meant to preclude the Agency from using nonrulemaking procedures when granting variances, it said so explicitly. (See RCRA section 3001(f)) that mandates use of informal rulemaking procedures for processing delisting petitions.) In other contexts, most notably RCRA sections 3004(o)(2) and 3005(j) (2), (3), (4), and (13), Congress itself explicitly authorized nonrulemaking procedures for granting other types of variances. It thus appears to the Agency that the brief reference to "regulations" in section 3004(m)(1) does not preclude the use of nonrulemaking procedures to grant individual variances to an already promulgated treatment standard.

Therefore, today's final rule promulgates modifications to 40 CFR 268.44 that allow a site-specific variance from the treatment standard, having no generic applicability and effect, to be granted through nonrulemaking procedures. The Agency agrees as a matter of policy to allow opportunity for public notice and comment prior to granting a nonrulemaking variance from the treatment standard. Because circumstances under which one might apply for a site-specific variance vary, vehicles for public comment will be specified on a case-by-case basis.

The Agency received no requests for variances from the treatment standards promulgated in the solvents and dioxins final rule or the California list final rule. It is difficult to predict how many requests for variances from the treatment standard will be received as a result of today's final rule. Therefore, the Agency is not establishing a specific format for the variance or specifying vehicles for providing public comment at this time. Since the goal of granting site-specific variances from the treatment standard through nonrulemaking procedures is to streamline the process, the Agency will likely provide for public comment through existing public participation vehicles such as permit applications or modifications, CERCLA Remedial Investigation/Feasibility Study documents, or other relevant procedures as appropriate. In cases when there is no existing proceeding which provides the opportunity for public participation, EPA will provide opportunity for notice and comment through publication in local newspapers, by radio broadcast, or through other media, similar to the variance procedures already in place under § 260.33. If necessary, the Agency will issue guidance at a later date on the format for an application and will specify procedures for public comment.

The criteria by which a nonrulemaking site-specific variance from the treatment standard will be evaluated remain the same as those previously promulgated. The demonstration should be made that the waste is significantly different from the wastes evaluated in establishing the treatment standard and cannot be treated in compliance with the applicable treatment standard. On a site-specific basis, it may be possible to determine that BDAT treatment is inappropriate for a particular waste stream. For example, incineration of large volumes of contaminated soil under certain site-specific conditions may be found to be inappropriate treatment. Such an assertion should be supported by analytical data and treatability studies to the greatest extent possible. Each request for a variance from the treatment standard must include a statement signed by the authorized representative of the applicant certifying that the information is correct.

The applicant must apply to the Assistant Administrator for the Office of Solid Waste and Emergency Response, addressing the criteria contained in § 268.44. The authority for granting site-specific variances to the treatment standard may be delegated to the Regional Administrator in the future, at which time the application would be made to the Regional Administrator in the region where the applicant is located.

The Assistant Administrator (or Regional Administrator, if authority is delegated) will evaluate the application and issue a draft notice tentatively granting or denying the application. Notification of this tentative decision will be provided by newspaper advertisement or radio broadcast in the locality where the applicant is located. The Assistant Administrator (or Regional Administrator, if authority is delegated) will accept comment on the tentative decision, usually for 30 days. Public hearings may be held upon request or at his discretion. A final decision will be made after evaluation of comments.

L. Rationale for Immediate Effective Date

The regulations promulgated today will be effective immediately except where the Agency has specified a national variance or otherwise specified an alternative effective date. HSWA requires that today's regulations become effective on or before the August 8, 1988 effective date of the restrictions on the first one-third of the wastes scheduled pursuant to RCRA section 3004(g)(4)(A). If the Agency fails to promulgate regulations for any of these wastes by the statutory effective date, the restrictions on disposal of the waste in a landfill or surface impoundment, stipulated in section 3004(g)(6)(A) take effect automatically on August 8, 1988. If the Agency has not promulgated treatment standards for any scheduled waste by May 8, 1990, that waste is prohibited from all forms of land disposal unless a generator has been granted an extension of the effective date (either a national variance or a case-by-case extension) or a "no migration" finding has been made. Hence, August 8, 1988, is the latest date for EPA to promulgate regulations that will prevent the "soft hammer" in section 3004(g) from falling for all First Third wastes. Section 3004(h) requires that regulations established under sections 3004 (d), (e), (f), or (g) be effective immediately upon promulgation. Furthermore, section 3004(m) specifies that regulations setting treatment standards must have the same effective date as applicable regulations established under sections 3004 (d), (e), (f), or (g). For today's regulations which set treatment standards and are promulgated under section 3004(g), this date will be August 8, 1988. Since the statute clearly states that the regulations implementing section 3004(g) must go into effect on or before August 8, 1988, in order to prevent the "soft hammer" from falling, EPA finds that good cause exists under section 3010(b)(3) to have an immediate effective date. For the same reason, EPA finds that good cause also