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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL-6921-5]
RIN 2050-AE76

Deferral of Phase IV Standards for PCB's as a Constituent Subject to Treatment in Soil

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: EPA is temporarily deferring a portion of the rule applying Land Disposal Restrictions (LDR) under the Resource Conservation and Recovery Act (RCRA) to constituents subject to treatment (CST) in soils contaminated with certain characteristic hazardous wastes. EPA promulgated this rule on May 26, 1998. Specifically, EPA is temporarily deferring the requirement that polychlorinated biphenyls (PCBs) be considered a CST when they are present in soils that exhibit the Toxicity Characteristic for metals. EPA is taking this action because the regulation appears to be discouraging generators from cleaning up contaminated soils, which is contrary to what EPA intended when we promulgated alternative treatment standards for contaminated soils. In addition, EPA needs more time to restudy the issue of appropriate treatment standards for metal-contaminated soils which also contain PCBs as CST. The Agency still requires generators to treat these soils to meet LDR standards for all hazardous constituents except PCBs. Generators also are required to treat PCBs if the total concentration of halogenated organic compounds in the soil equals or exceeds 1000 parts per million.

DATES: This rule is effective December 26, 2000.

ADDRESSES: Supporting materials are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA 22202. The docket identification number is F-2000-PCBP-FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, it is recommended that the public make an appointment by calling 703 603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost $0.15/page. The index and some supporting materials are available electronically. See the ``Supplementary Information'' section for information on accessing them.

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline at (800) 424-9346 or TDD (800) 553-7672 (hearing impaired). In the Washington, D.C. metropolitan area, call (703) 412-9810 or TDD (703) 412-3323. For more detailed information on

specific aspects of this rulemaking, contact Ernesto Brown, Office of Solid Waste, Mail Code 5303W, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave NW, Washington, D.C. 20460-0002, (703) 308-8608, brown.ernie@epa.gov

SUPPLEMENTARY INFORMATION: You can find the index and the following supporting materials on the Internet at: http://www.epa.gov/epaoswer/hazwaste/ldr/index.htm

Preamble Outline

I. Authority

These regulations are promulgated under the authority of sections 1006(b), 2002, and 3004 of RCRA, as amended, 42 U.S.C. 6905, 6012(a), 6921, and 6924.

II. Background

A. Land Disposal Restrictions Program

The LDR program generally requires that generators of hazardous wastes pretreat the

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wastes before they can be disposed of on land. The treatment must substantially reduce the toxicity or mobility of the hazardous waste to minimize short- and long-term threats to human health and the environment posed by the waste's disposal. See RCRA section 3004 (m)(1). EPA typically accomplishes this objective by requiring that hazardous constituents in the wastes be treated to, or be present at levels no greater than levels, set out in 40 CFR Part 268, reflecting performance of the Best Demonstrated Available Technology for the waste. In addition to BDAT treatment levels, EPA uses treatability variances (both risk-based and technology based), and determination equivalency (see 40 CFR 268.42) for situations where the treatment standard is specified as a method of treatment and other technologies perform comparably to the specified method.

B. Contaminated Soils

Contaminated soils excavated during a remedial action, whether it is conducted under RCRA, Superfund, or state authority, are subject to the Land Disposal Restriction (LDR) requirements when the soil contains listed hazardous

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waste or exhibits a hazardous characteristic, and when it is excavated outside of a corrective action management unit (CAMU) or an area of contamination (AOC). EPA's rules require that soils contamination with hazardous waste(s) meet LDR requirements when a generator excavates such soils and places them in a land disposal unit (See RCRA sections 3004(d)(3) and (e)(3) (requiring LDR requirements to apply to such contaminated soils); 63 FR at 28602 (May 26, 1998))[1]. The LDR requirements specify constituent concentrations which must be met in the treated soils, or in some cases particular technologies which must be employed, prior to placement of the soils. Application of these requirements to remedial actions has sometimes reduced the flexibility needed to make site-specific remedial decisions, and thus sometimes presented a barrier to cost-effective management of contaminated media. (As explained in the following section, however, the special standards for contaminated soils which EPA adopted in the Phase 4 rule should alleviate some of these difficulties, since those standards can be achieved without resort to combustion treatment technology.) While there are alternatives to managing contaminated soils which mitigate the burden of meeting these requirements (such as obtaining a treatability variance once the LDRs are triggered), it has been EPA's experience that the LDRs often have driven remedial decisions away from excavating the soils in the first place. Under such circumstances, facilities, may simply have deferred cleanup to a later date. In cases where cleanup was still pursued, it was often the case that either containment remedies have been employed (e.g., cap and cover in-place, thereby avoiding the LDRs) or the soils have been treated in-situ (which allows treatment without triggering LDRs). While containment and in-situ treatment of soils offer management options which have generally been less expensive than complying with the LDR

[1] Technically, the soils which are subject to LDRs, are (a) soil which contains a listed hazardous waste, and (b) soil which exhibits (or, in some cases, exhibited) a characteristic of hazardous waste. See discussion at 63 FR 28617-28619. This action applies to a subset of the second of these types of contaminated soils, as explained later in this notice. This action also uses the term ``contaminated soils'' to refer to soils which may potentially be subject to LDRs.

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requirements for the media, they may not always result in the most environmentally protective cleanup.

C. Alternative Treatment Standards for Contaminated Soils

EPA has long recognized the incentives and objectives for the hazardous waste prevention and cleanup programs differ fundamentally. EPA has developed extensive policies and regulations to preserve RCRA's goal of protectiveness, while providing oversight agencies the tools necessary to make effective site-specific remedial decisions. One such regulation is the Phase IV LDR Rule (63 FR 28603-04). Promulgated in May 26, 1998, the Phase IV LDR Rule established alternative soil treatment standards, in part, to remedy the disincentives to excavation/ex-situ treatment of soils which were created by application of the LDRs in a remedial setting. In recognition of the physical and chemical differences which often exist between as-generated waste and contaminated soils, these standards require that contaminated soils which will be land disposed be treated to reduce concentrations of hazardous constituents by 90 percent or meet hazardous constituent concentrations that are ten times the universal treatment standard (UTS), whichever is greater. (See Louisiana Environmental Action Network v. EPA, 172 F. 3d 65, 67, 70 (D.C. Cir. 1999) which upheld EPA's authority to develop more lenient treatment standards for contaminated soils and other remediation wastes in order to encourage remediation involving exhumation and treatment of these wastes, since ``the agency's authority to compel high-quality disposition of such wastes is not as great as it is for as yet undisposed waste.") The soil treatment standards apply to all underlying hazardous constituents
reasonably expected to be present in any given volume of contaminated soil when such constituents are found at initial concentrations greater than ten times the UTS (See 63 FR at 28608-28609; 40 CFR 268.49(d)).

D. Constituents Subject to Treatment

Importantly for the present rule, the existing standards further require that generators treat all constituents subject to treatment (CST)[2] in contaminated soils. See 63 FR at 28608-09; 40 CFR 268.49(d). A constituent subject to treatment is any hazardous constituent listed at 40 CFR 264.48 that might be present in the soil at levels exceeding 10 times the UTS for that constituent.
See 40 CFR 268.49(b). In the Phase IV rule, EPA imposed this requirement for the first time on soils exhibiting the Toxicity Characteristic (TC) for metals, and on soils containing listed hazardous wastes[3].

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[2] In response to comments to the NPRM (February 16, 2000), the Agency is using the term ``constituents subject to treatment" defined in 40 CFR 268.49(d) instead of underlying hazardous constituents which was used in the proposal. This is to avoid confusing the term UHC defined in 40 CFR 268.2(i) with constituents subject to treatment (a term EPA developed specifically for the alternative treatment standard for contaminated soils, although CST and UHC are essentially synonymous).

[3] The requirement already applied, however, to soils exhibiting the ignitability, corrosivity, reactivity, or organic toxicity characteristics.

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PCBs can be an example of a CST in contaminated soils, including metal-containing soils. Where this occurs, the Phase IV rule establishes a treatment standard of 100 ppm total PCBs in soil (10 times the UTS) or 90 percent reduction of total PCB concentrations in the soil, whichever is less stringent. See 40 CFR 268.49(c). EPA found that generators can achieve these standards without applying combustion technology, (see 63 FR at 28616 Table 4), although treatment often requires that heat be applied to the waste, as occurs with thermal desorption technology. The rules also provide another treatment option: to treat soils to the standards applicable to process wastes, although in that instance as well, soils that exhibit a hazardous characteristic must achieve treatment standards for CSTs before they are land disposed. 40 CFR 268.40(e). EPA found that generators can achieve these standards without applying combustion technology, (see 63 FR at 28616 Table 4), although treatment often requires that heat be applied to the waste, as occurs with thermal desorption technology.

RCRA also addresses PCBs in soils under Section 3004(d)(2)(E), the so-called California list provision. This provision prohibits land disposal of hazardous wastes that contain halogenated organic compounds at concentrations equal to or exceeding 1000 ppm. Congress specified this level (and the other California list levels) as a starting point in the land disposal prohibition process, prohibiting land disposal of wastes that pose the most obvious hazards. See 51 FR at 44718 (Dec. 11, 1986). PCBs are a type of halogenated organic compound. Consequently, in the absence of the Phase IV PCB standards, the 1000 ppm statutory level would be the upper bound of PCBs that could be in contaminated soil without triggering LDR treatment requirements (i.e., contaminated soils could not be land disposed equal to or greater than 1000 ppm total HOCs all of which, in theory, could be PCBs).

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III. Need to Defer Portions of the Phase IV Rule

A. Why Has Remediation of Certain PCB-Contaminated Soils Been Impeded?

Unfortunately, initial indications are that the requirement that PCBs be treated as a CST in soils exhibiting the TC for metals is having an effect opposite to what EPA intended. As EPA noted at proposal, cleanups of sites with metal characteristic soils where PCBs are now a CST and where the remedy was to involve soil exhumation, treatment and redisposal have stopped, or been seriously delayed. See Letter from Phillip Comella Esq. to Steven Silverman, EPA Office of General Counsel, April 21, 1999 detailing experiences of private entities, including waste generators, treaters and disposers; Memorandum to Administrative Record, November 2, 1999 (detailing experiences of EPA site managers). As set out in more detail in these communications, the reason is that as a practical matter a choice is now being presented between combustion and leaving soils in place. Some of the reasons attributed for this are:

I. limited effective non-combustion treatment presently available for PCBs, and what there is involves mobile units which face potential permitting delays at non-Superfund sites.
II. lack of State authorization to implement the amended soil standards, thus

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retaining PCBs as a CST, without the option of treating to 10 times the Universal Treatment Standards or 90 percent reduction from initial concentration.

Commenters acknowledge that at least some of these situations could be eligible for a treatment variance under 40 CFR 268.44. Such variances can be requested when a standard is demonstrably not achievable using non-combustion technology, or when treatment to LDR levels would discourage aggressive remediation. See LEAN v. EPA, 172 F. 3d at 70 (upholding EPA authority to issue treatment variances for remediation wastes where existing treatment standard discourages aggressive remediation). But there are undesirable delays attendant in the variance process, and EPA in any case believes that if a problem with a rule is widespread, it is appropriate to amend the rule rather than issuing variances piecemeal.

Commenters to the proposed rule reiterated that cleanups of TC metal soils containing PCBs is being impeded, but provided no additional empirical information in support.

EPA does not necessarily agree with all of these comments, but does believe that remediations involving TC soils contaminated with both PCBs and metals are being delayed or stopped. This situation has taken place after promulgation of the new Phase IV requirements respecting these soils, and, as indicated at proposal, it appears that at least some of the reasons for these delays are legitimately attributable to the new requirements in the Phase IV rule.

Commenters all supported this overall conclusion (albeit anecdotally rather than empirically). Thus, this aspect of the Phase IV rule appears at least potentially to be having an environmentally counterproductive effect of delaying cleanups and discouraging aggressive remediation.

B. Why the Temporary Deferral?

EPA believes it is appropriate to temporarily defer the requirement that PCBs be treated as an CST in TC soils under RCRA 1006(b) in order to investigate how best to integrate the RCRA LDR requirements for PCBs with the cleanup programs under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and RCRA (both the specific ``corrective action'' requirements of RCRA 3004(u) and (v) and 3008(h), and the cleanup requirements applying to RCRA regulated units, e.g., during closure).

Another reason is to provide EPA an opportunity to investigate further the relationship between the RCRA rules and those under the authority of the Toxic Substances Control Act (TSCA) for PCB remediation wastes. See 63 FR 35384 (June 29, 1998). TSCA allows ``bulk PCB remediation wastes'' including soils containing 50 ppm PCBs or greater to be disposed without treatment in a TSCA disposal facility or an RCRA subtitle C landfill. See 40 CFR 761.61(b)(2)(i). These TSCA standards, which allow disposal without treatment of soils containing any concentrations of PCBs greater or equal to 50 ppm, were not established to represent levels at which threats posed by land disposal of PCB-containing soils are minimized. Furthermore, those rules require persons disposing of PCBs to comply with all other applicable Federal, State, and local laws and regulations, and should not be read as overriding applicable

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RCRA requirements. Nonetheless, the TSCA rules serves a similar purpose as the RCRA Phase IV rule--an attempt to encourage aggressive remediation of contaminated soil (see 63 FR at 35409) and reflects the Agency's judgment that land disposal of these soils is reasonably protective.

Under RCRA the standard set forth by Congress for the LDR program was to ``* * * promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." See 42 U.S.C. 6924(m). Under TSCA Congress authorized EPA to prescribe methods for the disposal of PCBs so long as they do not ``present an unreasonable risk to health or the environment." See 15 U.S.C. 2605(e). TSCA also explicitly requires EPA to consider economic impact when promulgating rules under its authority. See 15 U.S.C. 2601(b) and (c). By comparison, Congress did not identify economic considerations under RCRA in setting treatment standards. ``* * * Waste that is nevertheless generated should be treated, stored or disposed of so as to minimize the present and future threat to human health and the environment." See 42 U.S.C. 6902(b). Thus, the RCRA LDR program differs from regulations promulgated under TSCA in two respects. First, the RCRA LDR program has an explicit requirement to treat waste prior to disposal. TSCA contains no such requirement. Second, TSCA has an explicit requirement to consider economic impacts when the Agency promulgates regulations under its authority that is not present in RCRA. Although both types of regulations are intended to address health and environmental risks from PCBs, these key differences between RCRA and TSCA can lead to different approaches to environmental regulation.

Certainly as an interim measure EPA believes it appropriate to seek to coordinate better the two sets of rules, and thus to defer the Phase IV rule while we further evaluate the workings and actual effect of the two sets of rules. EPA believes it is appropriate to temporarily defer the requirement that PCBs be treated as a CST in TC soils under RCRA 1006(b) in order to investigate how best to integrate the RCRA LDR requirements for PCBs with the cleanup programs under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and RCRA (both the specific ``corrective action" requirements of RCRA 3004(u) and (v) and 3008(h), and the cleanup requirements applying to RCRA regulated units, e.g., during closure).

C. What Is the Effect of the Deferral?

The statutory California list provision mentioned above (RCRA section 3004(d)(2)(E)) will create an upper bound on the concentration of PCBs in

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soil that could be disposed without treatment. As explained earlier, that upper bound will be 1,000 ppm, the statutory limit for halogenated organic compounds. This means that the temporary deferral will only affect a relatively narrow class of wastes: soils exhibiting the TC for metals and

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containing PCBs in concentration between 100 ppm and a maximum of 1000 ppm (this maximum applying only if no other HOCs are present in the contaminated soil).

RCRA allows temporary deferral of the Phase IV requirement. As in the temporary deferral of RCRA requirements to accommodate a potentially overlapping regulatory regime for underground storage tanks at issue in Edison Electric Inst. v. EPA, 2 F. 3d 438 (D.C. Cir. 1993), EPA here needs to investigate further the relationship of different sets of rules addressing PCB-contaminated soil disposal. These soils will be managed protectively during the deferral period, either in RCRA subtitle C or TSCA-approved landfills, and there is a reasonable upper bound on the concentration of PCBs that could be disposed of without treatment. See 2 F.3d at 452-53 citing these factors as a reasonable justification for a comparable temporary deferral. Moreover, EPA may permissibly alter land disposal restriction treatment standards for remediation wastes in order to encourage aggressive remediations. See LEAN, 172 F. 3d at 69-70.

The scope of this deferral is exclusive to soils exhibiting the TC for metals which contain PCBs as an underlying hazardous constituent. The requirement to treat PCBs as a CST also can apply to soils containing a listed hazardous waste, where the generator elects to comply with the alternative soil standard of 10 times Universal Treatment Standard or 90 percent reduction of initial concentrations. See 40 CFR 268. 49(d). It should be noted, however, that a generator would have the option of treating such soil to the standards for process wastes, see 40 CFR 268.49(b), in which case there is no requirement to treat CSTs. Thus, generators do not face the same quandary as they do with soils exhibiting the TC for metals which contain PCBs as a .

IV. Analysis of and Response to Comments

In general, all comments supported the deferral of PCBs as a constituent subject to treatment in soils. Commenters felt that the inconsistency between RCRA and TSCA regulations concerning the treatment/disposal of material containing PCBs should be resolved.

As noted at proposal, EPA believes it is appropriate to seek a better coordination between the two sets of rules, and thus to defer PCBs as an CST in soils, while the Agency further evaluates the workings and actual effect of the two sets of rules. Several commenters suggested that EPA simply defer to the TSCA rule without an independent determination that the TSCA standards are sufficient to minimize threats posed by land disposal. EPA does not believe that this suggestion can be supported. RCRA requires that treatment standards for hazardous waste must minimize the threats posed by land disposal. RCRA section 3004(m). The TSCA rule was not developed to satisfy that standard. See, e.g., Chemical Waste Management v. EPA, 976 F. 2d 2, 25 (D.C. Cir. 1992) (EPA may not defer LDR treatment requirements to less stringent disposal requirements of another environmental statute); see also Hazardous Waste Treatment Council v. EPA, 886 F. 2d 355, 362-63 (D.C. Cir. 1989) noting stringency of the minimize threat standard in RCRA section 3004 (m), and further explaining why that requirement justifies LDR standards more stringent than those developed pursuant to less stringent statutory standards).

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Another general recommendation is that EPA should extend the deferral to all soils, debris and PCB bulk product waste that contain listed hazardous waste, as well as for soils that are hazardous waste due to the exhibition of a TC for a metal. EPA has not received any hard information, or any convincing reasons, why the Phase IV requirements should be impeding treatment of soils contaminated with listed hazardous wastes. As already explained, the rules allow generators the option of treating the soil to the standards for process wastes, see 40 CFR 268.49(b), in which case there is no requirement to treat CSTs. Moreover, this alternative (to treat soil to meet the standards for listed hazardous waste) represents the status quo before the Phase IV rule (i.e. it merely restates already-existing regulatory requirements), so that one cannot properly attribute to the Phase IV rule any impediment to remediating these contaminated soils. Generators thus can continue to operate as they did before promulgation of the Phase IV rule.

V. State Authorization

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA hazardous waste program within the State. Following authorization, we maintain independent enforcement authority under sections 3007, 3008, 3013, and 7003 of RCRA, although authorized States have enforcement responsibility. A State would become authorized for today's proposed PCB treatment standard for contaminated soil by following the approval process described under 40 CFR 271.21. See 40 CFR 271 for the overall standards and requirements for authorization.

Like all land disposal restriction treatment standards, today's changes are proposed under the authority of 3004(g) and (m) of RCRA. These statutory provisions were enacted as part of the Hazardous and Solid Waste Amendments (HSWA) of 1984. Under section 3006(g) of RCRA, new requirements promulgated under the authority of statutory provisions added by HSWA go into effect in authorized States at the same time as they do in unauthorized States--as long as the new requirements are more stringent than the requirements a State is currently authorized to implement.

Authorized States are not required to modify their programs when we promulgate changes to Federal requirements that are less stringent than existing Federal requirements. This is because RCRA section 3009 allows the States to impose (or retain) standards that are more stringent than those in the Federal program. (See also 40 CFR 271.1(i)). Therefore, States that are authorized for the LDR program are not required to adopt today's changes, and these changes do not go into effect until the State revises its LDR program accordingly. However, we encourage States to allow compliance with the new PCB treatment standard for contaminated soil if they have the ability under State law to waive existing land disposal restriction treatment standards, or if they have adopted them but are not yet authorized. Again, if a State is not currently authorized for the LDR program, we will implement the new treatment standard in that State.

VI. Regulatory Assessments

A. Executive Order 12866

Under Executive Order 12866, (58 FR 51735 (October 4, 1993)) the Agency must

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determine whether a regulatory action is ``significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ``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

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> the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
>
> (2) create a 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 thereof; 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.

OMB has determined that this rule is not a ``significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review."

Economic Assessment

We estimated the costs of today's final rule to determine if it is a significant regulation as defined by the Executive Order. The analysis considered compliance cost savings from the deferral and resulted in cost savings. A detailed discussion of the methodology used for estimating the costs, economic impacts and the benefits attributable to today's final rule, followed by a presentation of the cost, economic impact and benefit results were prepared and documented in the following report: ``Economic Assessment of the Deferral of Phase IV Land Disposal Restriction Treatment Standards for Polychlorinated Biphenyls (PCBs) as an Underlying Hazardous Constituent in Contaminated Soils.'' This report can be found in its entirety in the docket for today's final rule. A summary of the report is provided below.

1. Methodology

To estimate the cost savings associated with today's final rule deferring of CST requirements for PCB-containing hazardous soils, the Agency estimated the difference between the costs that would have been incurred in the absence of the deferral and the costs estimated under the post-regulatory environment with the deferral. The cost savings are reported based upon a shift of more expensive baseline treatment technologies (incineration, thermal desorption or nonthermal treatment for PCB-containing hazardous waste soils that exhibit a TC for metal) followed by immobilization of the residue to less expensive post- regulatory treatment including

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immobilization of soils exhibiting a TC for metal soils. Although generally placing soils that are metal contaminated are prohibited from being combusted, all of the contaminated soils affected by this rulemaking have incineration as an option. Only soils with an insignificant organic content are prohibited from combustion as a treatment technology. Soils with PCBs at levels greater than 10 ppm are considered to have sufficient organic content. See May 23, 1994 memo from Elliott Laws to Waste Management Directors I--X for further details.

2. Results

(a) Volume

The procedure for estimating the volumes of PCB-containing hazardous wastes affected by today's final rule is detailed in the background document ``Economic Assessment of the Deferral of Phase IV Land Disposal Restriction Treatment Standards for Polychlorinated Biphenyls (PCBs) as an Underlying Hazardous Constituent in Contaminated Soils," which was placed in the docket for today's final rule. To estimate volumes of TC hazardous PCB contaminated soils affected by this rulemaking, the Agency looked at data received from a waste treatment firm and extrapolated it national estimates of soils remediated using Biennial Reporting Systems data. The Agency estimates annual affected soil volumes to be 86,500 tons.

(b) Costs

The Phase IV LDR final rule[4] applied a requirement to treat all TC metal waste (i.e., wastes that are hazardous because they exhibit the toxicity characteristic for selected metals and carry the corresponding EPA hazardous waste number D004 through D011) for CSTs reasonably expected to be present[5]. In practical terms, this means that if a hazardous waste that is only hazardous for metal constituents also contains organic constituents above the UTS levels, those underlying organic constituents must also be treated to the UTS level if the waste is to be land disposed[6]. For PCBs, the UTS level is 10 ppm[78].

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[4] 63 FR 28556, May 26, 1998.

[5] 40 CFR 268.4(e).

[6] Land disposal is defined under the Resource Conservation and Recovery Act (RCRA) broadly to include virtually all types of land- based solid waste management units such as landfills, waste piles, and surface impoundments.

[7] See 40 CFR 268.48 for the UTS level of PCB nonwastewaters at 10 ppm.

[8] The numerical treatment levels that must be met before a given waste can be land disposed, like the 10 ppm UTS level for PCBs, are based on a specific best demonstrated available technology (BDAT). For metals, the numerical treatment standards are based on immobilization. The BDAT for many organic constituents, including PCBs, is incineration. While the BDAT does not have to be used to reach the numerical treatment levels, the BDAT is often used in practice.

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The Phase IV LDR final rule also established an alternative set of treatment standards for hazardous soils. These alternative standards were designed to encourage cost-effective cleanup of hazardous contaminated soils that are subject to LDRs. Prior to the Phase IV LDRs, hazardous soils were required to comply with the traditional technology-based treatment standards developed for processed industrial hazardous waste. These treatment standards often proved to be inappropriate (e.g., not cost effective) and unachievable (e.g., did not account for heterogeneous soil matrices) when applied to hazardous constituents present in soils. For example, in the case of TC metal soils containing PCBs, treating both metals and PCBs would entail a combination of treatment technologies. These technologies most likely would consist of incineration (or other thermal treatment) to destroy the PCBs, followed by immobilization of the ash to prevent the metallic constituents from leaching. This treatment approach is problematic because (1) it is expensive, (2) it destroys the soil, which is a valuable natural resource, and (3) incineration of metal bearing waste and/or soils is generally considered to be impermissible dilution (because it may allow metals to volatilize and enter the atmosphere) unless it has sufficient organic content to justify treatment. The alternative soil treatment standards provide more flexible, less stringent treatment requirements that, for many contaminants, are achievable using a variety of non-thermal treatment alternatives. For instance, a site may now choose to (1) reduce hazardous constituents by at least 90 percent of their initial concentration, or (2) meet ten times the applicable universal treatment standard[9]. Thus, for TC metal soils that contain PCBs, the PCBs currently must be treated to either 90 percent reduction or to 100 ppm (which is 10 times the UTS level), whichever is greater, prior to land disposal. EPA intended that these alternative treatment standards would allow soils to be treated using non-combustion treatment technologies.

To estimate costs saving resulting from this rule, EPA examined a number of thermal and non-thermal treatment technologies for PCBs and TC metals along with their estimated costs and commercial availability. The Agency then took the estimated soil volumes and assigned treatment trains to percentages of the affected volume (e.g. 10 percent of affected soils are estimated to be treated through in-situ

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technologies) in both the baseline (i.e. pre-regulation) and post-rule. EPA's estimate of cost savings is the difference between the more expensive baseline treatment remedies (e.g. incineration) and the less expensive post-rule treatment remedies (e.g. stabilization). The baseline treatment remedies are more expensive because they require treatment of both PCBs and metal whereas the post-rule treatment remedies only require treatment of metals for the affected soils. The extent of the cost savings from the deferral of LDR treatment standards for TC metal PCB-containing hazardous waste soils depends on the decision whether to remediate the site, the decision to switch to in- situ clean-up remedies (avoiding LDR treatment standards) and the decision to pursue other administrative remedies such as treatability variances. As the result, EPA has estimated the incremental treatment cost savings attributable to the deferral of the Phase IV LDR treatment standards for PCBs as a CST in hazardous soils to be $47.6 million annually. EPA

[9] 40 CFR Sec. 268.49.

notes that these cost savings are not new savings under the Land Disposal Restriction program. Rather, these cost savings are saving previously provided from the PCB disposal rule (63 FR 34384, June 29, 1998). The PCB disposal rule allowed greater flexibility in the types of land disposal units that PCB-contaminated remediation waste could be placed in including RCRA Subtitle C hazardous waste landfills for soils with PCB concentrations greater than 50 ppm and Part 258 RCRA nonhazardous landfills for soils with PCB concentrations less than 50 ppm. See 40 CFR 761.61(a)(5)(ii)&(iii).

(c) Economic Impacts

EPA has not completed an economic impact analysis with today's final rule due to uncertainty regarding the identity of owner/operators of affected sites. Because this final rule results in cost savings mentioned above, any economic impacts would be favorable to affected entities. Because affected entities would be subject to less stringent treatment requirements for PCBs in TC contaminated soils, they would only have to treat the metals in the soil which would mean lower treatment costs and therefore less expensive site cleanups.

(d) Benefits

The primary benefit of this final rule is to encourage remediation of soils contaminated with both TC metals and PCB soils. The Economic Analysis completed for this rule documents a list of public commenters who have stipulated that they are not conducting cleanups under current regulations. These additional clean ups will reduce the potential for environmental releases of hazardous constituents, given the increased treatment of TC metals and placement of these soils into secure land disposal units.

B. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et. seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since

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the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives ``which minimize any significant economic impact of the proposed rule on small entities.'' 5 U.S.C. Sections 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule. The overall economic impact of today's final rule to defer LDR treatment standards for TC metal PCB-containing hazardous waste soils results in cost savings of $47.6 million (for additional detail see cost savings discussion above). We have therefore concluded that today's final rule will relieve regulatory burden for all small entities.

C. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ``Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

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. The rule would not impose any federal intergovernmental mandate because it imposes no enforceable duty upon state, tribal or local governments. States, tribes and local governments would have no compliance costs under this rule. It is expected that states will adopt this rule, and submit it for inclusion in their authorized RCRA programs, but they have no legally enforceable duty to do so. For the same reasons, EPA also has determined that this rule contains no regulatory requirements that might significantly or uniquely affect local

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governments. Thus, today's rule is not subject to the requirements of Sections 202 and 205 of

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UMRA.

D. Paperwork Reduction Act

The information collection requirements in this final rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. EPA has prepared and Information Collection Request (ICR) document: OSWER ICR No. 1442.15 (LDR Phase IV), and a copy may be obtained from Sandy Farmer, Collections Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Ave. N.W., Washington, D.C. 20460- 0002, by e-mail at farmer.sandy@epamail.epa.gov, or by calling (202) 260-2740. A copy may also be downloaded off the internet at http://www.epa.gov/icr.

EPA believes the changes in this final rule to the information collection do not constitute a substantive or material modification. This rule would not change any of the information collection requirements that are currently applicable RCRA Land Disposal Restrictions Phase IV except to possibly reduce those requirements by requiring fewer references to PCBs. There is no net increase in recordkeeping and reporting requirements (if anything, there may be a slight decrease, as just noted). As a result, the reporting, notification, or recordkeeping (information) provisions of this rule will not need to be submitted for approval to the Office of Management and Budget (OMB) under section 3504(b) of the Paperwork Reduction Act, 44 U.S.C. 3501 et. seq.

E. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: ``Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ``economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

F. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (``NTTAA''), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent

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with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

G. Executive Order 12898: Environmental Justice

Under Executive Order 12898, ``Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,'' as well as through EPA's April 1995, ``Environmental Justice Strategy, OSWER Environmental Justice Task Force Action Agenda Report,'' and National Environmental Justice Advisory Council, EPA has undertaken to incorporate environmental justice into its policies and programs. EPA is committed to addressing environmental justice concerns, and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all residents of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income, bears disproportionately high and adverse human health and environmental effects as a result of EPA's policies, programs, and activities, and all people live in clean and sustainable communities. To address this goal, EPA considered the impacts of this final rule on low-income populations and minority populations and concluded.

Today's final rule is intended to encourage aggressive remediation of contaminated soils, and thus, and to benefit all populations. As such, this rule is not expected to cause any disproportionately high and adverse impacts to minority or low-income communities versus non-minority or affluent communities.

H. Executive Order 13132: Federalism

Executive Order 13132, entitled ``Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ``meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ``Policies that have federalism implications'' are defined in the Executive Order to include regulations that have ``substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. EPA has determined that this rule, would not have ``federalism implications'' within the meaning of Executive Order 13132. This is because the rule would not impose any direct effects on States, would not preempt State law, and would not

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constrain State administrative discretion. In fact, States need not even adopt this final rule as part of their authorized programs. Thus, the Executive Order does not apply to this rule.

I. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition,

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Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ``to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Today's rule does not create a mandate on State, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit 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 United States prior to publication of the rule in the Federal Register. A Major rule cannot take effect until 60 days after it is published in the Federal Register. This action is [OR is not] a ``major rule" as defined by 5 U.S.C. 804(2). This rule will be effective.

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: December 15, 2000.
Carol M. Browner,
Administrator.

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For the reasons set out in the preamble, chapter 1, title 40 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.

Subpart C--[Amended]

2. Section 268.32 is added to subpart C to read as follows:

Sec. 268.32 Waste specific prohibitions--Soils exhibiting the toxicity characteristic for metals and containing PCBs.

(a) Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004--D011) and containing PCBs.

(b) The requirements of paragraph (a) of this section do not apply if:

(1)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the treatment standards specified in Subpart D of this part for EPA hazardous waste numbers D004--D011, as applicable; or

(2)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the alternative treatment standards specified in Sec. 268.49 for contaminated soil; or

(3) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition; or

(4) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under Sec. 268.44.

3. Appendix III to Part 268 is added to subpart C to read as follows:

Appendix III to Part 268--List of Halogenated Organic Compounds Regulated Under Sec. 268.32

In determining the concentration of HOCs in a hazardous waste for purposes of the Sec. 268.32 land disposal prohibition, EPA has defined the HOCs that must be included in a calculation as any compounds having a carbon-halogen bond which are listed in this Appendix (see Sec. 268.2). Appendix III to Part 268 consists of the following compounds:

I. Volatiles

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1. Bromodichloromethane
2. Bromomethane
3. Carbon Tetrachloride
4. Chlorobenzene
5. 2-Chloro-1,3-butadiene
6. Chlorodibromomethane
7. Chloroethane
8. 2-Chloroethyl vinyl ether
9. Chloroform
10. Chloromethane
11. 3-Chloropropene
12. 1,2-Dibromo-3-chloropropane
13. 1,2-Dibromomethane
14. Dibromomethane
15. Trans-1,4-Dichloro-2--butene
16. Dichlorodifluoromethane
17. 1,1-Dichloroethane
18. 1,2-Dichloroethane
19. 1,1-Dichloroethylene
20. Trans-1,2-Dichloroethene
21. 1,2-Dichloropropane
22. Trans-1,3-Dichloropropene
23. cis-1,3-Dichloropropene
24. Iodomethane
25. Methylene chloride
26. 1,1,1,2-Tetrachloroethane
27. 1,1,2,2-Tetrachloroethane
28. Tetrachloroethene
29. Tribromomethane
30. 1,1,1-Trichloroethane
31. 1,1,2-Trichloroethane
32. Trichlorothene
33. Trichloromonofluoromethane
34. 1,2,3-Thrichloropropane
35. Vinyl Chloride

II. Semivolatiles

1. Bis(2-chloroethoxy)ethane
2. Bis(2-chloroethyl)ether
3. Bis(2-chloroisopropyl)ether
4. p-Chloroaniline
5. Chlorobenzilate
6. p-Chloro-m-cresol
7. 2-Chloronaphthalene

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8. 2-Chlorphenol
9. 3-Chloropropionitrile
10. m-Dichlorobenzene
11. o-Dichlorobenzene
12. p-Dichlorobenzene
13. 3.3'-Dichlorobenzidine
14. 2,4-Dichlorophenol
15. 2,6-Dichlorophenol
16. Hexachlorobenzene
17. Hexachlorobutadiene
18. Hexachlorocyclopentadiene
19. Hexachloroethane
20. Hexachloroprophene
21. Hexachlorpropene
22. 4,4'-Methylenebis(2-chloroanaline)
23. Pentachlorobenzene
24. Pentachloroethane
25. Pentachloronitrobenzene
26. Pentachlorophenol
27. Pronamide
28. 1,2,4,5-Tetrachlorobenzene
29. 2,3,4,6-Tetrachlorophenol
30. 1,2,4-Trichlorobenzene
31. 2,4,5-Trichlorophenol
32. 2,4,6-Trichlorophenol
33. Tris(2,3-dibromopropyl)phosphate

III. Organochlorine Pesticides

1. Aldrin
2. alpha-BHC
3. beta-BHC
4. delta-BHC
5. gamma-BHC
6. Chlorodane
7. DDD
8. DDE
9. DDT
10. Dieldrin
11. Endosulfan I
12. Endosulfan II
13. Endrin
14. Endrin aldehyde
15. Heptachlor

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16. Heptachlor epoxide
17. Isodrin
18. Kepone
19. Methoxyclor
20. Toxaphene

IV. Phenoxyacetic Acid Herbicides

1. 2,4-Dichlorophenoxyacetic acid
2. Silvex
3. 2,4,5-T

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V. PCBs

1. Aroclor 1016
2. Aroclor 1221
3. Aroclor 1232
4. Aroclor 1242
5. Aroclor 1248
6. Aroclor 1254
7. Aroclor 1260
8. PCBs not otherwise specified

VI. Dioxins and Furans

1. Hexachlorodibenzo-p-dioxins
2. Hexachlorodibenzofuran
3. Pentachlorodibenzo-p-dioxins
4. Pentachlorodibenzofuran
5. Tetrachlorodibenzo-p-dioxins
6. Tetrachlorodibenzofuran
7. 2,3,7,8-Tetrachlorodibenzo-p-dioxin

Subpart D--[Amended]

4. In Sec. 268.48(a) Table UTS-Universal Treatment Standards is amended by adding a reference to new footnote number (8) to the entry for ``Total PCBs (sum of all PCB isomers, or all Aroclors)," and adding footnote (8), to read as follows:

Sec. 268.48 Universal treatment standards.

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(a) * * *

Regulated Constituent Common Name	CAS[1] Number	Wastewater Standard Concentration in mg/l[2]	Nonwastewater Standard Concentration in mg/l[2] unless noted as ``mg/l TCLP''
*	*	*	*
Total PCBs (sum of all PCB isomers, or all Arcolors)[8]	1336-36-3	0.10	10
*	*	*	*

* * * * *

5. Section 268.49 is amended by revising paragraph (d) to read as follows:

Sec. 268.49 Alternative LDR treatment standards for contaminated soil.

* * * * *

(d) Constituents subject to treatment. When applying the soil treatment standards in paragraph (c) of this section, constituents subject to treatment are any constituents listed in Sec. 268.48 Table UTS-Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except flouride, selenium, sulfides, vanadium, zinc, and that are present at concentrations greater than ten times the universal treatment standard. PCBs are not constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

* * * * *

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[8] This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004-D011 only.

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