

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Parts 403 and 503**

[FRL-5315-3]

RIN 2040-AC29

Standards for the Use or Disposal of Sewage Sludge

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: On November 25, 1992, pursuant to Section 405 of the Clean Water Act (CWA), EPA promulgated a regulation (40 CFR part 503) to protect public health and the environment from reasonably anticipated adverse effects of certain pollutants in sewage sludge (58 FR 9248, February 19, 1993). This regulation established requirements for the final use or disposal of sewage sludge when: (1) The sewage sludge is applied to the land either to condition the soil or to fertilize crops grown in the soil; (2) the sewage sludge is placed on the land for final disposal; or (3) the sewage sludge is incinerated. In addition, EPA also amended the General Pretreatment Regulations (40 CFR part 403) to establish a list of pollutants for which a removal credit may be available.

Today's action amends the part 503 sewage sludge regulation as a result of EPA's reconsideration of certain issues remanded by the U.S. Court of Appeals for additional justification or modification. The Agency is deleting the current land application pollutant limits for chromium and changing the land application pollutant concentration limit for selenium.

EPA is also amending the list of pollutants for which a removal credit may be available. This final rule removes chromium in sewage sludge that is land-applied from the list of regulated pollutants for which a removal credit may be available and adds it to the list of unregulated pollutants that are eligible for a removal credit.

EFFECTIVE DATE: The final rule is effective October 25, 1995. For purposes of judicial review, the final rule is issued at 1 p.m. on October 25, 1995.

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SUPPLEMENTARY INFORMATION:**A. Authority**

Today's rule is being promulgated under the authority of sections 307 and 405 of the Clean Water Act (CWA). In section 307(b) of the CWA, Congress directed EPA to establish categorical pretreatment standards for industrial discharges of toxic pollutants to publicly owned treatment works (POTWs). Congress also authorized POTWs in defined circumstances to provide relief from categorical pretreatment standards in the form of a removal credit to indirect dischargers. Section 307(b) authorizes a removal credit where, among other things, grant of the removal credit does not prevent the POTW from using or disposing its sewage sludge in compliance with section 405.

Section 405(d) of the CWA requires EPA to establish management practices and numerical limits adequate to protect public health and the environment from reasonably anticipated adverse effects of toxic pollutants in sewage sludge. Section 405(e) prohibits any person from disposing of sewage sludge from a publicly-owned treatment works or other treatment works treating domestic sewage through any use or disposal practice for which regulations have been established pursuant to section 405 except in compliance with the section 405 regulations.

B. Amendments to Part 503

On November 25, 1992, EPA promulgated, pursuant to section 405 of the CWA, Standards for the Use or Disposal of Sewage Sludge, (40 CFR part 503), published in the Federal Register on February 19, 1993 (58 FR 9248, *et seq.*). Section 405(d) of the CWA requires EPA to publish regulations specifying management practices for sewage sludge containing toxic pollutants and to establish numerical limitations for the toxic pollutants that may be present in sewage sludge in concentrations that may adversely affect public health and the environment. On March 5, 1993, the Leather Industries of America, Inc. filed a petition with the U.S. Circuit Court of Appeals for the District of Columbia Circuit seeking review of the pollutant limits for chromium found in Tables 1-4 of 40 CFR 503.13(b). On June 17, 1993, the City of Pueblo, Colorado, filed a petition for review with the U.S. Court of Appeals for the Tenth Circuit challenging the selenium pollutant limits in Tables 1-3 of 40 CFR 503.13(b). This case was subsequently transferred to the D.C. Circuit.

On November 15, 1994, the D.C. Circuit remanded the cumulative pollutant loading rate for chromium in Table 2 and the pollutant concentration limit for chromium and selenium in Table 3 to the Agency for modification or additional justification. *Leather Industries of America, Inc. v. Environmental Protection Agency*, 40 F.3d 392 (D.C. Cir. 1994).

The pollutant limits in Table 2 are determined from a risk-based exposure assessment. The pollutant concentrations in Table 3 are the lower of either (1) a risk-derived concentration or (2) the 99th percentile concentration derived from EPA's National Sewage Sludge Survey (NSSS), which includes data on sewage sludge from approximately 186 statistically representative publicly-owned treatment works. Sewage sludge that meets the pollutant concentration limits in Table 3 may be applied to land under less restrictive conditions than can sewage sludge that has higher concentration of metals. In the case of chromium and selenium, the 99th percentile concentration is lower than the risk-derived concentration so the limit specified in Table 3 for both chromium and selenium is the 99th percentile value. The D.C. Circuit concluded that section 405 of the CWA mandates a risk-based regulation and that EPA lacked the statutory authority to adopt pollutant concentration limits based on the 99 percentile because they are not risk-based. The court also determined that EPA lacked an adequate evidentiary basis for its risk-based chromium cumulative pollutant loading rate in Table 2 of § 503.13(b).

Today's rule amends 40 CFR 503.13(b) to delete the current pollutant limits for chromium in Tables 1-4 applicable to sewage sludge that is land applied. In addition, the Agency is amending 40 CFR 503.13(b) to change the selenium pollutant concentration limit in Table 3. This amendment is being promulgated under the authority of section 405 of the Clean Water Act (CWA), 33 U.S.C. § 1345.

1. Deletion of Pollutant Limits for Chromium in Land Applied Sewage Sludge

EPA based the Table 2 cumulative pollutant loading rate for chromium on an assessment of the potential for plant injury (measured as retardation in the growth of a young plant) from chromium in sewage sludge that is applied to the land. EPA derived the chromium cumulative pollutant loading rate from field study data that the Agency evaluated for the likelihood of plant injury. Because the field study

data did not show retardation in the growth of a young plant even at the highest soil/chromium levels from the field studies—3,000 kg/hectare, EPA established the cumulative pollutant loading rate for chromium at the highest value for which it had data.

The D.C. Circuit agreed that EPA is authorized to protect against plant injury and that EPA properly determined a plant toxicity threshold associated with chromium in sewage sludge. However, the court decided that EPA lacked adequate data to support the 3,000 kg/hectare chromium cumulative loading rate because EPA had no data that showed plant injury at soil levels of 3,000 kg/hectare or any other cumulative load.

In response to the court's remand, EPA has reviewed the record in this proceeding concerning potential risk to public health and the environment associated with land application of sewage sludge that contains chromium. As a result of its reconsideration, the Agency has determined that there is an insufficient basis at this time for the regulation of chromium in sewage sludge that is applied to the land. This determination is confirmed by EPA's review of new information concerning chromium and the land application of sewage sludge. Consequently, the Agency is amending Tables 1-4¹ to delete chromium from the regulated metals for the following reasons. First, EPA has reaffirmed its determination that chromium in sewage sludge appears predominantly in the trivalent form for which the likelihood of plant injury is substantially lower than the likelihood of plant injury from chromium in the hexavalent form. See 58 FR 9248, 9297.

Second, in addition to reexamining the rulemaking record, EPA obtained more recent data from field studies of crops grown on soil to which sewage sludge had been applied. These data are similar to those used in the final rule for evaluating the potential for plant injury from the chromium in sewage sludge. EPA evaluated these data using the same statistical methods used for the final rule to assess the potential for plant injury. Like the earlier data, these data show no relationship between plant injury associated with chromium in sewage sludge at high loading rates.

¹ The chromium limits in Tables 1, 3, and 4 are derived from the risk-based chromium limits in Table 2. Because the Agency has determined that it does not at this juncture have information that supports risk-based regulation of chromium in sewage sludge that is land applied, the chromium pollutant limits in Tables 1, 3, and 4 also are being deleted.

Finally, to confirm its determination that data do not support regulation of chromium at this juncture, EPA also took a second look at other pathways of exposure. After the plant toxicity pathway, the next significant pathway of concern is the risk associated with exposure of a tractor operator to chromium from sewage sludge in the dust churned up by the tractor. EPA reevaluated this pathway using current National Institute of Occupational Safety and Health (NIOSH) standards for worker exposure to trivalent chromium. EPA's second look at the tractor operator exposure pathway determined that the appropriate risk-based limit for this pathway is well in excess of its earlier finding of 5,000 mg/kg. The limit for this pathway using the updated NIOSH standard is almost two orders of magnitude in excess of the observed 99th percentile concentration for chromium in the NSSS. Given the fact that chromium limit for the next pathway of exposure—the ground-water pathway—is an order of magnitude greater than the 99th percentile sewage sludge concentration, EPA determined that it did not have data that justify regulation of chromium in land applied sewage sludge at this juncture. Applying the same criteria used for the final rule to determine whether to regulate a particular pollutant, EPA concluded that there is no current basis for establishing land application pollutant limits for chromium based on the tractor operator pathway or the ground-water pathway.² See 58 FR 9318 ("The Agency's risk assessment results for the pollutant shows no reasonably anticipated adverse effects on public health or the environment at the 99th percentile concentration found the sewage sludge from the NSSS." 58 FR 9318). Consequently, the Agency is today amending its sewage sludge use or disposal regulation to delete chromium from Tables 1-4 in 40 CFR 503.13(b). More details on the justification for deletion of the chromium land application pollutant limits are presented in the administrative record for this rulemaking.

² EPA also evaluated the risk associated with tractor operator exposure to hexavalent chromium by assuming that a small percentage of the chromium in sewage sludge might be hexavalent chromium. (As noted above, EPA has concluded that most chromium in sewage sludge should be in the trivalent, not hexavalent, form.) Again, the resulting risk-based chromium pollutant concentration limit would be substantially higher than the 99th percentile concentration.

2. Modification of the Pollutant Concentration Limit for Selenium in Table 3 of § 503.13

As explained above, the pollutant concentration limit in Table 3 is the more stringent of the risk-based limit or 99th percentile concentration value for each of nine pollutants. In the case of selenium, the more stringent cap is the 99th percentile number.³ EPA supported its adoption of this approach for the Table 3 limits on two bases. First, by adopting the lower of risk-based or 99th percentile concentration, EPA would provide an additional margin of safety to ensure adequate protection of public health and the environment. Second, adoption of the 99th percentile limit would prevent deterioration of sewage sludge from current levels of quality. The D.C. Circuit rejected both reasons, concluding that the statute requires a demonstrated link between risk and any pollutant concentration limits the Agency adopted. EPA has reconsidered the Table 3 selenium pollutant concentration limit and concluded that it should not adopt a more stringent concentration limit for selenium than the risk-based limit of 100 mg/kg. This risk-based concentration was derived from an assessment of the hazard to children, aged one to six, who ingest undiluted sewage sludge containing selenium. EPA's exposure assessment showed that so long as the concentration of the sewage sludge did not exceed 100 mg/kg of selenium, children would be adequately protected. EPA's exposure assessment used a number of conservative assumptions in evaluating effects on children from selenium exposure, including a reference dose for selenium based on lifetime exposure—a significantly protective factor. In these circumstances, EPA concluded that there is no risk basis for adopting a more stringent limit.

C. Amendment to Part 403

Many industrial facilities discharge large quantities of pollutants to POTWs where their wastewaters mix with wastewater from other sources, domestic sewage from private residences and run-off from various sources prior to treatment and discharge by the POTW. The introduction of pollutants to a POTW from industrial discharges may pose several problems. These include potential interference

³ The 99th percentile concentration is more stringent for selenium and chromium; for nickel, the risk-based and 99th percentile limits are the same. As described above, EPA is deleting chromium from the pollutants regulated in Tables 1-4.

with the POTW's operation or pass-through of pollutants if inadequately treated. Congress, in section 307(b) of the Act, directed EPA to establish categorical pretreatment standards to prevent these potential problems. Congress also recognized that, in certain instances, POTWs could provide some or all of the treatment of an industrial user's wastewater that would be required pursuant to the categorical pretreatment standard. Consequently, Congress also established a discretionary program for POTWs to grant "removal credits" to their indirect dischargers. The credit, in the form of a less stringent categorical pretreatment standard, allows an increased concentration of a pollutant in the flow from the indirect discharger's facility to the POTW.

Section 307(b) of the CWA establishes a three-part test a POTW would need to meet to obtain removal credit authority for a given pollutant. A removal credit may be authorized only if (1) the POTW "removes all or any part of such toxic pollutant," (2) the POTW's ultimate discharge would "not violate that effluent limitation, or standard which would be applicable to that toxic pollutant if it were discharged" directly rather than through a POTW and (3) the POTW's discharge would "not prevent sludge use and disposal by such [POTW] in accordance with section [405]. * * *" Section 307(b).

The United States Court of Appeals for the Third Circuit has interpreted the statute to require EPA to promulgate comprehensive sewage sludge regulations before any removal credits could be authorized. *NRDC v. EPA*, 790 F.2d 289, 292 (3rd Cir. 1986) *cert. denied*, 479 U.S. 1084 (1987). Congress made this explicit in the Water Quality Act of 1987, which provided that EPA could not authorize any removal credits until it issued the sewage sludge use and disposal regulations required by section 405(d)(2)(a)(ii). EPA has promulgated removal credit regulations that are codified at 40 CFR part 403.7.

At the same time EPA promulgated the part 503 regulation, EPA also amended the part 403 General Pretreatment Regulations to add a new Appendix G that includes two tables of pollutants that would be eligible for a removal credit so long as the other procedural and substantive requirements of 40 CFR part 503 and 40 CFR 403.7 are met. The first table (Appendix G—Section I) lists, by use or disposal practice, the pollutants that are regulated in part 503 and eligible for removal credit authorization. The second table (Appendix G—Section II) lists, by use or disposal practice,

additional pollutants that are eligible for a removal credit if the concentration of the pollutant in sewage sludge does not exceed a prescribed concentration. The pollutants in Appendix G—Section II are the pollutants that EPA evaluated and decided not to regulate during development of the part 503 regulation. See 58 FR at 9381–5. Currently, chromium is included on both Appendix G—Section I and Appendix G—Section II.

As explained above, EPA is today promulgating a final rule that deletes chromium from the pollutants that are regulated when sewage sludge is applied to the land because EPA has concluded that there is no current basis for establishing chromium limits for land-applied sewage sludge. Consequently, because Appendix G—Section I lists only pollutants regulated in part 503 and because the Agency has deleted chromium from the list of regulated pollutants, EPA is removing chromium from Appendix G—Section I for land application.

In the 1993 amendments to part 403, EPA included pollutants that it evaluated for risk and decided not to regulate in Appendix G—Section II at the highest concentration evaluated as safe. Consequently, because EPA has now concluded that it does not need to regulate chromium to protect the plant toxicity pathway, under the criterion applied in the final rule, EPA should include chromium in Appendix G—Section II in the land application column at the next highest concentration evaluated as safe.

The next highest result for a pathway that EPA assessed and evaluated as safe for the final rule is the tractor operator pathway—Pathway 11. EPA determined that a tractor operator is protected from occupational exposure to chromium from sewage sludge so long as the concentration in the sewage sludge did not exceed 5,000 mg/kg. See Technical Support Document for the Land Application of Sewage Sludge Table 5.4–5, p. 5–435. However, as noted above, EPA has now reevaluated that pathway and determined that the actual protective level is substantial in excess of this concentration. The next level of risk after the tractor operator pathway is the ground-water pathway—12,000 mg/kg. Technical Support Document for the Land Application of Sewage Sludge, *ibid*. Therefore, under the criterion adopted in the final rule, the Appendix G—Section II concentration for chromium should be 12,000 mg/kg.

While the public had an opportunity to comment on the land application risk assessment that underlies the final Part 503 regulation, there has been no

opportunity to comment on EPA's reevaluation of the tractor operator pathway assessment. (Elsewhere in today's Federal Register, EPA is proposing to amend Appendix G—Section II to establish the new chromium concentration based on its reanalysis of the Pathway 11 for chromium.) Consequently, it would not be appropriate to take final action today to add chromium to Appendix G—Section II at the ground-water pathway concentration level—the next level after the reevaluated tractor operator pathway.

But if EPA deletes chromium from Appendix G—Section I without including a concentration for sewage sludge that is land applied in Appendix G—Section II at this time, POTWs will not be able to seek removal credit authority until such time as EPA has proposed and promulgated a new chromium removal credit number. Therefore, EPA also is promulgating an amendment to Appendix G—Section II that adds a footnote for the interim that states that the removal credit concentration for chromium in land-applied sewage sludge will be established on a case-by-case basis. This change is necessary to ensure there is no uncertainty about the continued eligibility of chromium in sewage sludge for removal credits, pending EPA's promulgation of the final rule that amends Appendix G—Section II.

Until today, POTWs complying with the Part 503 land application chromium pollutant limits were eligible to seek removal credit authority for chromium. It would not make sense to eliminate removal credits for chromium when EPA has now decided not to regulate chromium in sewage sludge. While EPA is considering what concentration level for chromium to establish in Appendix G—Section II, a removal credit will continue to be available for chromium. If a POTW whose sewage sludge is land-applied requests authorization to grant a removal credit for chromium, the Approval Authority (EPA or an NPDES-authorized State with an approved pretreatment program) will make a decision on a case-by-case basis about what the allowable chromium concentration for removal credits purposes should be.

In today's final rulemaking, EPA also is correcting an error in the entry for bis(2-ethylhexyl)phthalate in Appendix G—Table II for a lined surface disposal site. The current entry is 100 milligrams per kilogram. Results of the surface disposal risk assessment indicate that the limit for bis(2-ethylhexyl)phthalate for a lined surface disposal site is unlimited (interpreted to mean greater

than 100,000 milligrams per kilogram)—see “Technical Support Document for Surface Disposal of Sewage Sludge,” EPA 822-R-93-019, November 1992. For this reason, the entry in Table II for bis(2-ethylhexyl)phthalate for a lined surface disposal site should be 100,000 milligrams per kilogram (i.e. 100 grams per kilogram) instead of 100 milligrams per kilogram. The superscript 3 was inadvertently left-off of the current Table II entry for bis(2-ethylhexyl)phthalate for a lined surface disposal unit. Today’s rulemaking corrects that error by adding the superscript 3 to the entry.

D. Procedural Requirements

Based on its reassessment of the rulemaking record and new information, EPA is today taking final action amending its part 503 regulations. EPA’s action deletes the chromium pollutant limits for land application in Tables 1, 2, 3, and 4 of § 503.13(b) and amends the selenium pollutant concentration limit in Table 3 of § 503.13(b). EPA also is amending its list of pollutants in land-applied sewage sludge that are eligible for a removal credit. EPA is removing chromium from the list of regulated pollutants and adding it to the list of unregulated pollutants for which a removal credit may be available.

Section 553 of the Administrative Procedure Act provides that when an agency for good cause finds that notice and public comment procedure are impracticable, unnecessary or contrary to the public interest, it may issue a rule without first providing notice and comment. In addition, the agency may make the rule effective immediately. EPA has concluded here that it should amend both the part 403 and part 503 regulations as described above without providing for notice and comment and make these changes effective immediately.

1. Notice and Comment

EPA has concluded that notice and comment on today’s action are unnecessary. As explained above, the D.C. Circuit concluded that the statute requires risk-based regulation and that the Agency lacked the data to support risk-based regulation of chromium to prevent plant injury. EPA has reviewed the record in the sewage sludge rulemaking in light of the D.C. Circuit decision. The Agency’s second look at the data does not reveal additional information, not previously considered by EPA, that would support regulation of chromium in sewage sludge to prevent plant injury. As a result, the chromium land application pollutant limits must be withdrawn. Further, the

data do not support adoption of a more stringent pollutant concentration limit for selenium than 100 mg/kg.

EPA also has concluded that there is good cause for amending its part 503 regulation without first providing for notice and comment. EPA received ample comment on issues related to the regulation of chromium and selenium in sewage sludge that is applied to the land over the course of a lengthy, multi-year rulemaking effort. During the process, extensive comments on the Agency’s pathway exposure assessments and the underlying data were received from nationally known experts on sewage sludge. Scientists possessing a wide understanding of the scientific and technical issues associated with sewage sludge use or disposal provided a broad critique of the exposure assessment models used to develop the proposed regulation. In developing the final regulation, EPA relied on several of these experts to develop the land application exposure assessment that formed the basis for the pollutant limits in Tables 1–4 of § 503.13(b). In light of this, further comment is unwarranted.

Under the final part 403 and part 503 regulations, a removal credit was available for chromium when sewage sludge is land applied, so long as the sewage sludge met the ceiling concentration limit of 3,000 mg/kg in Table 1 of 40 CFR 503.13(b)(1) and the pollutant limits in either Table 2, 3 or 4 at 40 CFR 503.13(b)(1). As explained above, to preserve the eligibility of chromium for a removal credit when EPA deleted chromium from Tables 1, 2, 3 and 4, EPA has added a footnote to the list of pollutants in Appendix G—Section II that indicates the land application chromium sewage sludge concentration for removal credit purposes will be determined on a case-by-case basis. Because EPA action in shifting chromium from Appendix G—Section I to Appendix G—Section II reflects no substantive change in the actual sewage sludge requirements that must be met for removal credit eligibility, comment on this change is not needed.

2. Effective date

Under section 405 of the CWA, EPA’s sewage sludge regulation must require compliance with the regulation as expeditiously as practicable but in no case later than 12 months after publication, unless such regulation requires construction of new pollution control facilities, in which case the regulation must require compliance expeditiously, but not later than two years from publication. The part 503 regulation was effective on March 22,

1993. In the case of the chromium pollutant limits, the regulation required compliance by February 19, 1994. Section 553 of the Administrative Procedure Act requires publication of a substantive rule not less than 30 days before its effective date except in certain circumstances. These include “a substantive rule which grants or recognizes an exemption or relieves a restriction” or “as otherwise provided by the agency for good cause found and published with the rule.” 5 U.S.C. section 553(d) (1) and (3). Because this rule relieves a restriction, the Agency has determined that these amendments should be effective immediately.

Given its determination that the rule should be effective immediately, the Agency also is providing, pursuant to 40 CFR 23.2, that the rule is issued for the purpose of judicial review on the effective date.

E. Regulatory Requirements

1. Executive Order 12866

Executive Order 12866 requires EPA to prepare an assessment of the costs and benefits of any “significant regulatory action.” Because the effect of today’s rule is to relieve the regulated community from current part 503 requirements, costs to the regulated community should be reduced. Consequently, no assessment of costs and benefits is required.

2. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601–612, whenever an agency is required to publish a General 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 impact of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). No regulatory flexibility analysis is required, however, if the head of the Agency certifies that the rule will not have a significant impact on a substantial number of small entities.

This action to modify the part 503 regulation promulgated today is deregulatory in nature and thus will only provide beneficial opportunities for entities that may be affected by the rule. Accordingly, I certify that this regulation will not have a significant economic impact on a substantial number of small entities. This regulation, therefore, does not require a regulatory flexibility analysis.

3. Paperwork Reduction Act

There are no reporting, notification, or recordkeeping (information) provisions

in this rule. Such provisions, were they included, would be submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

4. Unfunded Mandates

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), P.L. 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, or tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. When such a statement is needed for an EPA rule, 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, giving them meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising them on compliance with the regulatory requirements.

EPA has determined that today's amendments to part 403 and part 503 do not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local or tribal governments or the private sector in any one year. The changes to the part 503 regulation promulgated today, to the extent they reduce the costs of complying with current requirements, will, in fact, lessen the regulatory burden on State, local, or tribal governments.

The part 503 regulation includes monitoring and recordkeeping

requirements for certain POTWs and other treatment works treating domestic sewage when sewage sludge is applied to the land. Because EPA will no longer regulate the amount of chromium applied to the land in sewage sludge, POTWs and other treatment works treating domestic sewage will not need to incur any monitoring and recordkeeping cost for chromium. Consequently, there are either no (or reduced) costs associated with the final rule promulgated today. Thus, today's rule is not subject to the requirements in sections 202 and 205 of the Act.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments that may operate publicly owned treatment works (POTWs) generating sewage sludge. The rule would not significantly affect small governments because, as explained above, the amendments would reduce the monitoring and recordkeeping requirements associated with land application. The amendments also would not uniquely affect small governments because deleting the land application pollutant limits for chromium and changing the pollutant concentration limit for selenium will not affect POTWs operated by small governments differently from other sewage sludge users or disposers.

List of Subjects

40 CFR Part 403

Environmental protection, Incineration, Land application, Pollutants, Removal credits, Sewage sludge, and Surface disposal.

40 CFR Part 503

Environmental Protection, Frequency of monitoring, Incineration, Incorporation by reference, Land application, Management practices, Pathogens, Pollutants, Reporting and recordkeeping requirements, Sewage sludge, Surface disposal and Vector attraction reduction.

Dated: October 10, 1995.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, title 40 of the Code of Federal Regulations is amended as set forth below:

**PART 403—GENERAL
PRETREATMENT REGULATIONS FOR
EXISTING AND NEW SOURCES OF
POLLUTION**

1. The authority citation for 40 CFR part 403 continues to read as follows:

Authority: Sec. 54(c)(2) of the Clean Water Act of 1977, (Pub. L. 95-217) sections 204(b)(1)(C), 208(b)(2)(C)(iii), 301(b)(1)(A)(ii), 301(b)(2)(A)(ii), 301(b)(2)(C), 301(h)(5), 301(i)(2), 304(e), 304(g), 307, 308, 309, 402(b), 405 and 501(a) of the Federal Water Pollution Control Act (Pub. L. 92-500) as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987 (Pub. L. 100-4).

2. Appendix G to part 403 is revised to read as follows:

Appendix G To Part 403—Pollutants Eligible For A Removal Credit

I. Regulated Pollutants in Part 503 Eligible for a Removal Credit

Pollutants	Use or disposal practice		
	LA	SD	I
Arsenic	X	X	X
Beryllium			X
Cadmium	X		X
Chromium		X	X
Copper	X		
Lead	X		X
Mercury	X		X
Molybdenum	X		
Nickel	X	X	X
Selenium	X		
Zinc	X		
Total hydrocarbons.			X ¹

Key:

LA—land application.

SD—surface disposal site without a liner and leachate collection system.

I—firing of sewage sludge in a sewage sludge incinerator.

¹ The following organic pollutants are eligible for a removal credit if the requirements for total hydrocarbons in subpart E in 40 CFR Part 503 are met when sewage sludge is fired in a sewage sludge incinerator: Acrylonitrile, Aldrin/Dieldrin(total), Benzene, Benzidine, Benzo(a)pyrene, Bis(2-chloroethyl)ether, Bis(2-ethylhexyl)phthalate, Bromodichloromethane, Bromoethane, Bromoform, Carbon tetrachloride, Chlordane, Chloroform, Chloromethane, DDD,DDE,DDT, Dibromochloromethane, Dibutyl phthalate, 1,2-dichloroethane, 1,1-dichloroethylene, 2,4-dichlorophenol, 1,3-dichloropropene, Diethyl phthalate, 2,4-dinitrophenol, 1,2-diphenylhydrazine, Di-n-butyl phthalate, Endosulfan, Endrin, Ethylbenzene, Heptachlor, Heptachlor epoxide, Hexachlorobutadiene, Alpha-hexachlorocyclohexane, Beta-hexachlorocyclohexane, Hexachlorocyclopentadiene, Hexachloroethane, Hydrogen cyanide, Isophorone, Lindane, Methylene chloride, Nitrobenzene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, Pentachlorophenol, Phenol, Polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzo-p-dioxin, 1,1,2,2-tetrachloroethane, Tetrachloroethylene, Toluene, Toxaphene, Trichloroethylene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, and 2,4,6-Trichlorophenol.

II. ADDITIONAL POLLUTANTS ELIGIBLE FOR A REMOVAL CREDIT
[milligrams per kilogram—dry weight basis]

Pollutant	Use or disposal practice			
	LA	SD	I	
			Unlined ¹	Lined ²
Arsenic			³ 100	
Aldrin/Dieldrin (Total)	2.7			
Benzene	³ 16	140	3400	
Benzo(a)pyrene	15	³ 100	³ 100	
Bis(2-ethylhexyl)phthalate		³ 100	³ 100	
Cadmium		³ 100	³ 100	
Chlordane	86	³ 100	³ 100	
Chromium	4		³ 100	
Copper		³ 46	³ 100	1400
DDD, DDE, DDT (Total)	1.2	2000	2000	
2,4 Dichlorophenoxy-acetic acid		7	7	
Fluoride	730			
Heptachlor	7.4			
Hexachlorobenzene	29			
Hexachlorobutadiene	600			
Iron	³ 78			
Lead		³ 100	³ 100	
Lindane	84	³ 28	³ 28	
Malathion		0.63	0.63	
Mercury		³ 100	³ 100	
Molybdenum		40	40	
Nickel			³ 100	
N-Nitrosodimethylamine	2.1	0.088	0.088	
Pentachlorophenol	30			
Phenol		82	82	
Polychlorinated biphenyls	4.6	<50	<50	
Selenium		4.8	4.8	4.8
Toxaphene	10	³ 26	³ 26	
Trichloroethylene	³ 10	9500	³ 10	
Zinc		4500	4500	4500

Key: LA—land application.
SD—surface disposal.
I—incineration.
¹ Sewage sludge unit without a liner and leachate collection system.
² Sewage sludge unit with a liner and leachate collection system.
³ Value expressed in grams per kilogram—dry weight basis.
⁴ Value to be determined on a case-by-case basis.

PART 503—STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE

1. The authority citation for part 503 continues to read as follows:

Authority: Sections 405(d) and (e) of the Clean Water Act, as amended by Pub. L. 95-217, Sec. 54(d), 91 Stat. 1591 (33 U.S.C. 1345 (d) and (e)); and Pub. L. 100-4, Title IV, Sec. 406 (a), (b), 101 Stat., 71, 72 (33 U.S.C. 1251 et seq.).

2. § 503.13(b) is revised to read as follows:

§ 503.13 Pollutant limits.

* * * * *

(b) Pollutant concentrations and loading rates—sewage sludge.
(1) Ceiling concentrations.

TABLE 1 OF § 503.13.—CEILING CONCENTRATIONS

Pollutant	Ceiling concentration (milligrams per kilogram) ¹
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

¹ Dry weight basis.

(2) Cumulative pollutant loading rates.

TABLE 2 OF § 503.13.—CUMULATIVE POLLUTANT LOADING RATES

Pollutant	Cumulative pollutant loading rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

(3) Pollutant concentrations.

TABLE 3 OF § 503.13.—POLLUTANT CONCENTRATIONS

Pollutant	Monthly average concentration (milligrams per kilogram) ¹
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

¹ Dry weight basis.

(4) Annual pollutant loading rates.

TABLE 4 OF § 503.13.—ANNUAL POLLUTANT LOADING RATES

Pollutant	Annual pollutant loading rate (kilograms per hectare per 365 day period)
Arsenic	2.0
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Nickel	21

TABLE 4 OF § 503.13.—ANNUAL POLLUTANT LOADING RATES—Continued

Pollutant	Annual pollutant loading rate (kilograms per hectare per 365 day period)
Selenium	5.0
Zinc	140

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[FR Doc. 95-25740 Filed 10-24-95; 8:45 am]

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