under the authority of Pub. L. 102–587, 106 Stat. 5039.

2. From 5 a.m. on June 4, 2001, through 8 p.m. on September 30, 2002, § 117.1051 is temporarily amended by adding paragraph (d)(4) as follows:

§ 117.1051 Lake Washington Ship Canal.

* * * * *

(d) * * *

(4) From 5 a.m. on June 4, 2001, to 8 p.m. September 30, 2002, the Ballard Bridge, mile 1.1, need not open both draw leaves for the passage of vessels, including those engaged in towing operations, except at 5 a.m., 12:30 p.m., and 8 p.m., if at least five hours notice is given.

* * * * *

Dated: February 2, 2001.

Erroll Brown,

Rear Admiral, U.S. Coast Guard, Commander, Thirteenth Coast Guard District.

[FR Doc. 01–3550 Filed 2–9–01; 8:45 am]

BILLING CODE 4910–15–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[MD105–3054b; FRL–6916–5]

Approval and Promulgation of Air Quality Implementation Plans; Maryland; Approval of Opacity Recodifications and Revisions to Visible Emissions COMAR 26.11.06.02

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve the State Implementation Plan (SIP) revisions submitted by the State of Maryland for the purposes of recodifying Maryland's general opacity regulations and for providing procedures whereby a source may apply for and be granted a federally enforceable alternative visible emission standard. In the Final Rules section of this **Federal Register**, EPA is approving the State's SIP submittals as a direct final rule without prior proposal because the Agency views these as noncontroversial submittals and anticipates no adverse comments. A more detailed description of the state submittals and EPA's evaluation are included in a Technical Support Document (TSD) prepared in support of this rulemaking action. A copy of the TSD is available, upon request, from the EPA Regional Office listed in the **ADDRESSES** section of this document. If no adverse comments are received in response to this action, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time.

DATES: Comments must be received in writing by March 14, 2001.

ADDRESSES: Written comments should be addressed to Denis Lohman, Acting Chief, Technical Assessment Branch, Mailcode 3AP22, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; and the Maryland Department of the Environment, 2500 Broening Highway, Baltimore, Maryland 21224.

FOR FURTHER INFORMATION CONTACT: Ruth E. Knapp, (215) 814–2191, at the EPA Region III address above, or by e-mail at knapp.ruth@epa.gov.

SUPPLEMENTARY INFORMATION: For further information regarding the recodifications to Maryland's general opacity regulations and the procedures by which a source may apply for and be granted an alternative visible emission standard, please see the information provided in the direct final action, with the same title, located in the ''Rules and Regulations'' section of this **Federal Register** publication.

Dated: November 30, 2000.

Bradley M. Campbell,

Regional Administrator, Region III.

[FR Doc. 01–3379 Filed 2–9–01; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[FRL–6932–8]

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Proposed Exclusion

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule and request for comment.

SUMMARY: The Environmental Protection Agency (EPA or Agency) today is proposing to grant a petition submitted by BMW Manufacturing Corporation, Greer, South Carolina (BMW), to exclude (or ''delist'') a certain hazardous waste from the list of hazardous wastes. BMW will generate the petitioned waste by treating wastewater from BMW's automobile assembly plant when aluminum is one of the metals used to manufacture automobile bodies. The waste so generated is a wastewater treatment sludge that meets the definition of F019. BMW petitioned EPA to grant a generator-specific delisting, because BMW believes that its F019 waste does not meet the criteria for which this type of waste was listed. EPA reviewed all of the waste-specific information provided by BMW, performed calculations, and determined that the waste could be disposed in a landfill without harming human health and the environment. Today's proposed rule proposes to grant BMW's petition to delist its F019 waste, and requests public comment on the proposed decision. If the proposed delisting becomes a final delisting, BMW's petitioned waste will no longer be classified as F019, and will not be subject to regulation as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The waste will still be subject to local, State, and Federal regulations for nonhazardous solid wastes.

DATES: EPA is requesting public comments on this proposed decision. Comments will be accepted until March 29, 2001. Comments postmarked after the close of the comment period will be stamped ''late.'' These ''late'' comments may not be considered in formulating a final decision.

Any person may request a hearing on this proposed decision by filing a request with Richard D. Green, Director of the Waste Management Division, EPA, Region 4, whose address appears below, by February 27, 2001. The request must contain the information prescribed in section 260.20(d).

ADDRESSES: Send two copies of your comments to Jewell Grubbs, Chief, RCRA Enforcement and Compliance Branch, U.S. Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, Atlanta, Georgia 30303. Send one copy to Cindy Carter, Appalachia III District, South Carolina Department of Health and Environmental Control, 975C North Church Street, Spartanburg, South Carolina 29303. Identify your comments at the top with this regulatory docket number: R4–00–01–BMWP. Comments may also be submitted by e-mail to *sophianopoulos.judy@epa.gov.* If files are attached, please identify the format.

Requests for a hearing should be addressed to Richard D. Green, Director, Waste Management Division, U.S. Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW., Atlanta, Georgia 30303.

The RCRA regulatory docket for this proposed rule is located at the EPA Library, U.S. Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, Atlanta, Georgia 30303, and is available for viewing from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. The docket contains the petition, all information submitted by the petitioner, and all information used by EPA to evaluate the petition.

The public may copy material from any regulatory docket at no cost for the first 100 pages, and at a cost of $0.15 per page for additional copies.

Copies of the petition are available during normal business hours at the following addresses for inspection and copying: U.S. EPA, Region 4, Library, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW., Atlanta, Georgia 30303, (404) 562–8190; and Appalachia III District, South Carolina Department of Health and Environmental Control, 975C North Church Street, Spartanburg, South Carolina 29303. The EPA, Region 4, Library is located near the Five Points MARTA station in Atlanta. The Appalachia III District Office of the South Carolina Department of Health and Environmental Control is located on North Church Street between Whitney Road and Mendala, near the Spartanburg Regional Medical Center. Documents are also available for viewing and downloading at the Web Site of EPA, Region 4: *http://www.epa.gov/region4/index.html* At this site, click on ''Delisting,'' and then on individual documents to download them.

FOR FURTHER INFORMATION CONTACT: For general and technical information about this proposed rule, contact Judy Sophianopoulos, South Enforcement and Compliance Section, (Mail Code 4WD–RCRA), RCRA Enforcement and Compliance Branch, U.S. Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW., Atlanta, Georgia 30303, (404) 562–8604, or call, toll free, (800) 241–1754, and leave a message, with your name and phone number, for Ms. Sophianopoulos to return your call.

SUPPLEMENTARY INFORMATION: The contents of today's preamble are listed in the following outline:

I. Background

A. What Laws and Regulations Give EPA the Authority To Delist Wastes?

On January 16, 1981, as part of its final and interim final regulations implementing section 3001 of RCRA, EPA published an amended list of hazardous wastes from non-specific and specific sources. This list has been amended several times, and is published in 40 CFR 261.31 and 261.32. These wastes are listed as hazardous because they exhibit one or more of the characteristics of hazardous wastes identified in Subpart C of part 261 (i.e., ignitability, corrosivity, reactivity, and toxicity) or meet the criteria for listing contained in section 261.11(a)(2) or (a)(3).

Individual waste streams may vary, however, depending on raw materials, industrial processes, and other factors. Thus, while a waste that is described in these regulations generally is hazardous, a specific waste from an individual facility meeting the listing description may not be. For this reason, sections 260.20 and 260.22 provide an exclusion procedure, allowing persons to demonstrate that a specific waste from a particular generating facility [1] should not be regulated as a hazardous waste.

To have their wastes excluded, petitioners must show, first, that wastes generated at their facilities do not meet any of the criteria for which the wastes were listed. See section 260.22(a) and the background documents for the listed wastes. Second, the Administrator must determine, where he/she has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. Accordingly, a petitioner also must demonstrate that the waste does not exhibit any of the hazardous waste characteristics (i.e., ignitability, reactivity, corrosivity, and toxicity), and must present sufficient information for the EPA to determine whether the waste contains any other toxicants at hazardous levels. See section 260.22(a), 42 U.S.C. 6921(f), and the background documents for the listed wastes. Although wastes which are ''delisted'' (i.e., excluded) have been evaluated to determine whether or not they exhibit any of the characteristics of hazardous waste, generators remain obligated under RCRA to determine whether or not their wastes continue to be nonhazardous based on the hazardous waste characteristics (i.e., characteristics which may be promulgated subsequent to a delisting decision.)

In addition, residues from the treatment, storage, or disposal of listed hazardous wastes and mixtures containing listed hazardous wastes are also considered hazardous wastes. See sections 261.3(a)(2)(iv) and (c)(2)(i), referred to as the ''mixture'' and ''derived-from'' rules, respectively. Such

[1] Although no one produces hazardous waste intentionally, many industrial processes result in the production of hazardous waste, as well as useful products and services. A ''generating facility'' is a facility in which hazardous waste is produced, and a ''generator'' is a person who produces hazardous waste or causes hazardous waste to be produced at a particular place. Please see 40 CFR 260.10 for regulatory definitions of ''generator,'' ''facility,'' ''person,'' and other terms related to hazardous waste, and 40 CFR part 262 for regulatory requirements for generators.

wastes are also eligible for exclusion and remain hazardous wastes until excluded. On December 6, 1991, the U.S. Court of Appeals for the District of Columbia vacated the ''mixture/derived-from'' rules and remanded them to the EPA on procedural grounds. Shell Oil Co. v. EPA, 950 F.2d 741 (D.C. Cir. 1991). On March 3, 1992, EPA reinstated the mixture and derived-from rules, and solicited comments on other ways to regulate waste mixtures and residues (57 FR 7628). These rules became final on October 30, 1992, 57 FR 49278), and should be consulted for more information regarding waste mixtures and solid wastes derived from treatment, storage, or disposal of a hazardous waste. The mixture and derived-from rules are codified in 40 CFR 261.3, paragraphs (a)(2)(iv) and (c)(2)(i). EPA plans to address waste mixtures and residues when the final portion of the Hazardous Waste Identification Rule (HWIR) is promulgated.

On October 10, 1995, the Administrator delegated to the Regional Administrators the authority to evaluate and approve or deny petitions submitted in accordance with sections 260.20 and 260.22, by generators within their Regions (National Delegation of Authority 8–19), in States not yet authorized to administer a delisting program in lieu of the Federal program. On March 11, 1996, the Regional Administrator of EPA, Region 4, redelegated delisting authority to the Director of the Waste Management Division (Regional Delegation of Authority 8–19).

B. How Did EPA Evaluate This Petition?

This petition requests a delisting for a hazardous waste listed as F019. In making the initial delisting determination, EPA evaluated the petitioned waste against the listing criteria and factors cited in sections 261.11(a)(2) and (a)(3). Based on this review, the EPA agrees with the petitioner that the waste is nonhazardous with respect to the original listing criteria. (If EPA had found, based on this review, that the waste remained hazardous based on the factors for which the waste was originally listed, EPA would have proposed to deny the petition.) EPA then evaluated the waste with respect to other factors or criteria to assess whether there is a reasonable basis to believe that such additional factors could cause the waste to be hazardous. See section 260.22(a) and (d). The EPA considered whether the waste is acutely toxic, and considered the toxicity of the constituents, the concentration of the constituents in the waste, their tendency to migrate and to bioaccumulate, their persistence in the environment once released from the waste, plausible and specific types of management of the petitioned waste, the quantities of waste generated, and waste variability.

1. What Methods for Determining Delisting Levels Did EPA Use in the Past?

For this delisting determination, EPA used the information described in the preceding paragraph to identify plausible exposure routes (i.e., groundwater, surface water, air) for hazardous constituents present in the petitioned waste.

What is the EPACML Model and how is it Used to Calculate Delisting Levels? EPA used the EPA Composite Model for Landfills (EPACML) fate and transport model, modified for delisting, as one approach for determining the proposed delisting levels for BMW's waste. See 56 FR 32993–33012, July 18, 1991, for details on the use of the EPACML model to determine the concentrations of constituents in a waste that will not result in groundwater contamination. Delisting levels are the maximum allowable concentrations for hazardous constituents in the waste, so that disposal in a landfill will not harm human health and the environment by contaminating groundwater, surface water, or air. A Subtitle D landfill is a landfill subject to RCRA Subtitle D nonhazardous waste regulations, and to State and local nonhazardous waste regulations. If EPA makes a final decision to delist BMW's F019 waste, BMW must meet the delisting levels and dispose of the waste in a Subtitle D landfill, because EPA determined the delisting levels based on a landfill model. However, at a future date BMW may beneficially reuse the waste after receiving approval by the EPA [2] that reuse is at least as protective of human health and the environment as disposal in a landfill. With the EPACML approach, EPA calculated a delisting level for each hazardous constituent by using the maximum estimated waste volume to determine a Dilution Attenuation Factor (DAF) from a table of waste volumes and DAFs previously calculated by the EPACML model, as modified for delisting. See Table 2 of section II.B. below, which is adapted from 56 FR 32993–33012, July 18, 1991. The maximum estimated waste volume is the maximum number of cubic yards of petitioned waste that BMW estimated it would dispose of each year. The delisting level for each constituent is equal to the DAF multiplied by the maximum contaminant level (MCL) which the Safe Drinking Water Act allows for that constituent in drinking water. The delisting level is a concentration in the waste leachate that will not cause the MCL to be exceeded in groundwater underneath a landfill where the waste is disposed. This method of calculating delisting levels results in conservative levels that are protective of groundwater, because the model does not assume that the landfill has the controls required of Subtitle D landfills.

2. What Is the DRAS That Uses the New EPACMTP Model To Calculate Not Only Delisting Levels, But Also To Evaluate the Effects of the Waste on Human Health and the Environment?

The EPA is also proposing to use the Delisting Risk Assessment Software (DRAS),[3] developed by EPA, Region 6, to evaluate this delisting petition. The DRAS uses a new model, called the EPA Composite Model for Leachate Migration with Transformation Products (EPACMTP). The EPAMCTP improves on the EPACML model in several ways. EPA is proposing to use the DRAS to calculate delisting levels and to evaluate the impact of BMW's petitioned waste on human health and the environment.

Today's proposal provides background information on the mechanics of the DRAS, and the use of the DRAS in delisting decision-making. Please see the EPA, Region 6, *RCRA Delisting Technical Support Document* (RDTSD) for a complete discussion of the DRAS calculation methods. The RDTSD, and **Federal Register**s, 65 FR 75637–75651, December 4, 2000, and 65 FR 58015–58031, September 27, 2000, are the sources of the DRAS information presented in today's preamble, and are included in the RCRA regulatory docket for this proposed rule.

The DRAS performs a risk assessment for petitioned wastes that are disposed of in the two waste management units of concern: surface impoundments for liquid wastes and landfills for non-liquid wastes. BMW's petitioned waste is solid, not liquid, and will be disposed

[2] EPA will ask for and respond to public comment before making a decision on whether the reuse that BMW may propose is at least as protective of human health and the environment as disposal in a Subtitle D landfill.

[3] For more information on DRAS and EPAMCTP, please see 65 FR 75637–75651, December 4, 2000 and 65 FR 58015–58031, September 27, 2000. The December 4, 2000 **Federal Register** discusses the key enhancements of the EPACMTP and the details are provided in the background documents to the proposed 1995 Hazardous Waste Identification Rule (HWIR) (60 FR 66344, December 21, 1995). The background documents are available through the RCRA HWIR FR proposal docket (60 FR 66344, December 21, 1995)

in a landfill; therefore, only the application of DRAS to landfills will be discussed in this preamble.

DRAS calculates releases from solid-phase wastes in a landfill, with the following assumptions: (1) the wastes are disposed in a Subtitle D landfill and covered with a 2-foot-thick native soil layer; (2) the landfill is unlined or effectively unlined due to a liner that will eventually completely fail. The two parameters used to characterize landfills are (1) area and (2) depth (the thickness of the waste layer). Data to characterize landfills were obtained from a nationwide survey of industrial Subtitle D landfills.[4] Parameters and assumptions used to estimate infiltration of leachate from a landfill are provided in the *EPACMTP Background Document and User's Guide,* Office of Solid Waste, U.S. EPA, Washington, DC, September 1996.

DRAS uses the EPACMTP model to simulate the fate and transport of dissolved contaminants from a point of release at the base of a landfill, through the unsaturated zone and underlying groundwater, to a receptor well at an arbitrary downstream location in the aquifer (the rock formation in which the groundwater is located). DRAS evaluates, with the EPACMTP model, the groundwater exposure concentrations at the receptor well that result from the chemical release and transport from the landfill (*Application of EPACMTP to Region 6 Delisting Program: Development of Waste Volume-Specific Dilution Attenuation Factors,* U.S. EPA, August 1996). For the purpose of delisting determinations, receptor well concentrations for both carcinogens and non-carcinogens from finite-source degraders and non-degraders are determined with this model. Delisted waste is a finite source, because in a finite period of time, the waste's constituents will leach and move out of the landfill. Please see Paragraph 8. Contaminant Release and Transport Scenario in section I.B.3. of this preamble.

3. Why Is the EPACMTP an Improvement Over the EPACML?

The EPACMTP includes three major categories of improvements over the EPACML. The improvements include:

(1) Incorporation of additional fate and transport processes (e.g., degradation of chemical constituents; fate and transport of metals);

(2) Use of enhanced flow and transport equations (e.g., for calculating transport in three dimensions); and

(3) Revision of the Monte Carlo methodology (e.g., to allow use of site-specific, waste-specific data) (*EPACMTP Background Document and User's Guide,* Office of Solid Waste, U.S. EPA, Washington, DC, September 1996).

A discussion of the key enhancements which have been implemented in the EPACMTP is presented here and the details are provided in the background documents to the proposed 1995 Hazardous Waste Identification Rule (HWIR) (60 FR 66344, December 21, 1995). The background documents are available through the RCRA HWIR **Federal Register** proposal docket (60 FR 66344, December 21, 1995). For explanations of mathematical and chemical terms used in the discussion, please contact Judy Sophianopoulos, South Enforcement and Compliance Section, (Mail Code 4WD–RCRA), RCRA Enforcement and Compliance Branch, U.S. Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW., Atlanta, Georgia 30303, (404) 562–8604, or call, toll free, (800) 241–1754, and leave a message, with your name and phone number, for Ms. Sophianopoulos to return your call. You may also contact her by e-mail: *sophianopoulos.judy@epa.gov.*

The EPACML accounts for: one-dimensional steady and uniform advective flow; contaminant dispersion in the longitudinal, lateral, and vertical directions; and sorption. However, advances in groundwater fate and transport have been made in recent years and EPA proposes and requests public comment on the use of the EPACMTP, which is a more advanced groundwater fate and transport model, for this RCRA delisting.

The EPACML was limited to conditions of uniform groundwater flow. It could not handle accurately the conditions of significant groundwater mounding and non-uniform groundwater flow due to a high rate of infiltration from the waste disposal units. These conditions increase the transverse horizontal, as well as the vertical, spreading of a contaminant plume.

The EPACMTP model overcomes the deficiencies of the EPACML in the following way: The subsurface as modeled with the EPACMTP consists of an unsaturated zone beneath a landfill and a saturated zone, the underlying water table aquifer. Contaminants move vertically downward through the unsaturated zone to the water table. The EPACMTP simulates one-dimensional, vertically downward flow and transport of contaminants in the unsaturated zone, as well as two-dimensional or three-dimensional groundwater flow and contaminant transport in the underlying saturated zone. The EPACML used a saturated zone module that was based on a Gaussian distribution of the concentration of a chemical constituent in the saturated zone. The module also used an approximation to account for the initial mixing of the contaminant entering at the water table (saturated zone) underneath the waste unit. The module accounting for initial mixing in the EPACML could lead to unrealistic groundwater concentrations. The enhanced EPACMTP model incorporates a direct linkage between the unsaturated zone and saturated zone modules which overcomes these limitations of the EPACML. The following mechanisms affecting contaminant migration are accounted for in the EPACMTP model: Transport by advection and dispersion, retardation resulting from reversible linear or nonlinear equilibrium sorption on the soil and aquifer solid phase, and biochemical degradation processes. The EPACML did not account for biochemical degradation, and did not account for sorption as accurately as the EPACMTP.

The EPACMTP consists of four major components:

(1) A module that performs one-dimensional analytical and numerical solutions for water flow and contaminant transport in the unsaturated zone beneath a waste management unit;

(2) A numerical module for steady-state groundwater flow subject to recharge from the unsaturated zone;

(3) A module of analytical and numerical solutions for contaminant transport in the saturated zone; and

(4) A Monte Carlo module for assessing the effect of the uncertainty resulting from variations in model parameters on predicted receptor well concentrations.

As is true of any model, the EPACMTP is based on a number of simplifying assumptions that make the model easier to use and that ensure its computational efficiency. The major simplifying assumptions used in the EPACMTP are summarized below.

1. *Soil and Aquifer Medium Properties.* It is assumed that the soil and aquifer are uniform, porous media and that flow and transport are described by Darcy's Law [5] and the advection-dispersion equation [5], respectively. The EPACMTP does not account for the presence of preferential pathways such as fractures and macropores. Although the aquifer properties are assumed to be uniform,

[4] Nationwide Survey of Industrial Subtitle D Landfills, Westat, 1987

the model does allow for anisotropy [5] in hydraulic conductivity.

2. *Flow in the Unsaturated Zone.* Flow in the unsaturated zone is assumed to be steady-state, one-dimensional, vertical flow from beneath the source toward the water table. The lower boundary of the unsaturated zone is assumed to be the water table. The flow in the unsaturated zone is assumed to be predominantly gravity-driven, and therefore the vertical flow component accounts for most of the fluid flux between the source and the water table. The flow rate is assumed to be determined by the long-term average infiltration rate through the landfill.

3. *Flow in the Saturated Zone.* The saturated zone module of the EPACMTP is designed to simulate flow in an unconfined aquifer with constant saturated thickness. The model assumes regional flow in a horizontal direction with vertical disturbance resulting from recharge and infiltration from the overlying unsaturated zone and landfill. The lower boundary of the aquifer is assumed to be impermeable. Flow in the saturated zone is assumed to be steady-state. The EPACMTP accounts for different recharge rates beneath and outside the source area. Groundwater mounding beneath the source is represented in the flow system by increased head values at the top of the aquifer. This approach is reasonable as long as the height of the mound is small relative to the thickness of the saturated zone.

4. *Transport in the Unsaturated Zone.* Contaminant transport in the unsaturated zone is assumed to occur by advection and dispersion. The unsaturated zone is assumed to be initially contaminant-free, and contaminants are assumed to migrate vertically downward from the disposal facility. The EPACMTP can simulate both steady-state and transient transport in the unsaturated zone with single-species or multiple-species chain decay reactions and with linear or nonlinear sorption.

5. *Transport in the Saturated Zone.* Contaminant transport in the saturated zone is assumed to be a result of advection and dispersion. The aquifer is assumed to be initially contaminant-free, and contaminants are assumed to enter the aquifer only from the unsaturated zone immediately beneath the waste disposal facility, which is modeled as a rectangular, horizontal plane source. The EPACMTP can simulate both steady-state and transient three-dimensional transport in the aquifer. For steady-state transport, the contaminant mass flux entering at the water table must be constant with time; for the transient case, the flux at the water table may be constant or may vary as a function of time. The EPACMTP can simulate the transport of a single species or multiple species, chain decay reactions, and linear sorption.

6. *Contaminant Phases.* The EPACMTP assumes that the dissolved phase is the only mobile phase and disregards interphase mass transfer processes other than adsorption onto the solid phase. The model does not account for volatilization in the unsaturated zone; this is a conservative approach for volatile chemicals. The model also does not account for the presence of a nonaqueous-phase liquid (such as oil) or for transport in the gas phase. When a mobile oil phase is present, significant contaminant migration may occur within it, and the EPACMTP may underestimate the movement of hydrophobic chemicals (chemicals that ''prefer'' not to be dissolved in water, but to be dissolved in oil or oil-like materials).

7. *Chemical Reactions.* The EPACMTP computes chemical reactions involving adsorption and decay processes. The EPACMTP assumes that sorption of organic compounds in the subsurface is represented by linear adsorption isotherms in both the unsaturated and saturated zones. It is assumed that adsorption of contaminants onto the soil or aquifer solid phase occurs instantaneously and is entirely reversible. The effect of geochemical interactions is especially important in fate and transport analyses of metals. For simulation of metals, the EPACMTP uses sorption isotherms generated by EPA's MINTEQA2 metals speciation model, which takes into account the fact that many metals can exist in more than one chemical form or species, and that geochemical conditions can have large effects on the mobility of metals. The EPACML could not account for metals speciation. MINTEQA2 is used to generate effective sorption isotherms for individual metals. The sorption isotherms correspond to a range of geochemical conditions that cause a metal to be present in different chemical forms or species which sorb (or bind) to subsurface material in different ways with different binding strengths (*EPACMTP Metals Background Document*, Office of Solid Waste, U. S. EPA, Washington, DC, September 1996). The transport modules for both the unsaturated and saturated zones in EPACMTP have been enhanced to incorporate the nonlinear MINTEQA2 sorption isotherms. This enhancement provides the model with the capability to simulate the impact of pH, leachate organic matter, natural organic matter, iron hydroxide and the presence of other ions in the groundwater on the mobility of metals in the unsaturated and saturated zones. The EPACMTP also accounts for chemical and biological transformation processes. All transformation reactions are represented by first-order decay processes. An overall decay rate is specified for the model; therefore, the model cannot explicitly consider the separate effects of multiple degradation processes such as oxidation, hydrolysis, and biodegradation. The user must determine the overall, effective decay rate when multiple decay processes are to be represented. To maximize its flexibility, the EPACMTP has the capability of determining the overall decay rate from chemical-specific hydrolysis constants using soil and aquifer temperature and pH values. The EPACMTP assumes that reaction stoichiometry (the proportion of each chemical taking part in a chemical reaction) is prescribed for scenarios involving chain decay reactions. The speciation factors are specified as constants by the user (see the *EPACMTP Background Document and User's Guide*, Office of Solid Waste, U.S. EPA, Washington, DC, September 1996). In reality, these coefficients may change as functions of aquifer conditions (for example, temperature and pH), concentration levels of other chemical components, or both.

8. *Contaminant Release and Transport Scenario.* Two source release scenarios are considered in the EPACMTP: continuous (infinite) and finite-source. Only the finite-source scenario is considered for delisting. For finite-source scenarios, the release of contaminants occurs over a finite period of time, after which the leachate concentration becomes zero (that is, all the contaminants in the waste disposed

[5] Definitions: *Darcy's Law* states that the quantity of groundwater (Q) moving in an aquifer, expressed as volume of water per unit of time, is equal to the product of the aquifer's hydraulic conductivity (K); the cross-sectional area (A) through which the groundwater moves and which is at a right angle to the direction of groundwater flow; and the hydraulic gradient (dh/dl): Q=KA(dh/dl). The *advection-dispersion equation* indicates that contaminant transport is dependent on soil properties, such as bulk density, porosity, volumetric water content, and fraction of organic carbon; contaminant properties, such as solubility in water, diffusion coefficient in air, strength of binding to soil organic carbon, Henry's Law Constant, (the ratio of a contaminant's concentration in air to its concentration in water), and; site properties, such as recharge rate, contaminant concentrations in recharge, depth to groundwater, and dimensions of modeled layer. *Anistropy* is a condition where properties are not the same in every direction.

of in the landfill have leached out). The landfill parameters used by the EPACMTP to calculate contaminant release include values and/or frequency distributions of the capacity and dimensions of the landfill, the leachate concentration, infiltration and recharge rates, pulse duration, the fraction of hazardous waste in the landfill, the density of the waste, and the concentration of the chemical constituent in the hazardous waste. Data on the areas, volumes, and locations of landfills were obtained from the *Nationwide Survey of Industrial Subtitle D Landfills,* Westat, 1987. Derivation of the parameters for landfills is described in the *EPACMTP Background Document and User's Guide*, Office of Solid Waste, U.S. EPA, Washington, DC, September 1996. For finite-source scenarios, simulations are performed for transient conditions, and the source is assumed to be a pulse of finite duration. In the case of landfills, the pulse duration is based on the initial amount of contaminant in the landfill, infiltration rate, landfill dimensions, waste and leachate concentration, and waste density. For a finite-source scenario, the model can calculate either the peak receptor well concentration for non-carcinogens or an average concentration over a specified period for carcinogens. The finite-source methodology in the EPACMTP is discussed in detail in the *EPACMTP Background Document for the Finite Source Methodology for Chemicals with Transformation Products and Implementation of the HWIR,* Office of Solid Waste, U.S. EPA, Washington, DC, September 1996.

9. *EPACMTP Modeling Assumptions and Input Parameters.* Specific EPACMTP modeling assumptions (in addition to the simplifying assumptions discussed in the eight preceding paragraphs) are summarized in Table 1A, below. This table also provides information on important input parameters as well as on their data sources or details. Overall, EPACMTP input parameters can be organized in the following four groups:

1. Source-specific parameters
2. Chemical-specific parameters
3. Unsaturated zone-specific parameters
4. Saturated zone-specific parameters

For delisting, the EPACMTP is run in Monte Carlo mode (probabilistic calculations), and the source-, chemical-, unsaturated zone-, and saturated-zone specific parameters are represented by probability distributions reflecting variations on a national or a regional level. Specific capabilities and requirements associated with running the EPACMTP in the Monte Carlo mode are presented in Chapter 3 of *EPA's Composite Model for Leachate Migration with Transformation Products, EPACMTP: User's Guide,* Office of Solid Waste, U.S. EPA, Washington, DC, 1997. The Monte Carlo analysis determines the effect of the possible range of the input parameter of concern on the receptor well concentration. Output values produced for each iteration are sorted and ranked from highest to lowest in order to obtain a probabilistic distribution of receptor well concentrations. The different groups of input parameters are summarized below. For chemicals that were not modeled using the EPACMTP fate and transport model, the most conservative DAF was assigned (i.e., DAF=18f).

TABLE 1A.—EPACMTP MODELING ASSUMPTIONS AND INPUT PARAMETERS

Modeling assumptions	
Modeling element	**Description or value**
Management Scenario	Landfill.
Modeling Scenario	Finite-source Monte Carlo; depleting source for organics, constant concentration pulse source for metals.
Exposure Evaluation	Downgradient groundwater receptor well; maximum well concentration of non-carcinogens during modeling period, maximum 30-year average well concentration of carcinogens; 10,000-year exposure period.
Regulatory Protection	Level 90 percent.
Source-specific parameters	
Parameter	**Description or value**
Landfill Area	Derived.
Landfill Volume	User-specified.
Infiltration Rate from Landfill	Site-based, derived from water balance using HELP model.
Leaching Duration from Landfill	Derived, continues until all constituents have leached out; 20 years (operational life of unit).
Chemical-specific parameters	
Parameter	**Description and source**
Decay Rate:	
Organic Constituents	Hydrolysis rate constants compiled by U.S. EPA ORD.
Metals	No decay.
Sorption:	
Organic Constituents	Koc constants compiled by U.S. EPA ORD.
Metals	MINTEQA2 sorption isotherm coefficients (Kd) for Pb, Hg (II), Ni, Cr (III), Ba, Cd, Ag, Zn, Cu (II), Be]; pH- dependent isotherm coefficients for As (III), Cr (VI), Se (VI), Th.
Unsaturated zone-specific parameters	
Parameter	**Description and source**
Depth to Groundwater	Site-based, from API and USGS hydrogeologic database.

TABLE 1A.—EPACMTP MODELING ASSUMPTIONS AND INPUT PARAMETERS—Continued

Soil Hydraulic Parameters: Fraction Organic Carbon Bulk Density.	U.S. EPA ORD data based on national distribution of three soil types (sandy loam, silt loam, silty clay loam).

Saturated zone-specific parameters

Parameter	Description and source
Recharge Rate	Site-based, derived from regional precipitation and evaporation data and soil type.
Aquifer Thickness	Site-based, from API and USGS hydrogeologic database.
Hydraulic Conductivity	Site-based, from API and USGS hydrogeologic database.
Hydraulic Gradient	Site-based, from API and USGS hydrogeologic database.
Porosity	Effective porosity derived from national distribution of aquifer particle diameter.
Bulk Density	Derived from porosity.
Dispersivity	Derived from distance to receptor well.
Groundwater Temperature	Site-based, from USGS regional temperature map.
Fraction Organic Carbon	National distribution, from U.S. EPA STORET database.
pH	National distribution, from U.S. EPA STORET database.

Receptor well parameters

Well element	Description and source
Radial Distance from Landfill	Nationwide distribution, from U.S. EPA OSW database.
Angle Off-Center	Unifrom within ± 90° from plume center line (no restriction within plume).
Depth of Intake Point	Uniform throughout saturated thickness of aquifer.

Notes:

Table is adapted from Tables 2-1, Chapter 2 of Region 6's RCRA Delisting Technical Support Document, EPA906–D–98–001, Interim Final, August 1, 2000.

API = American Petroleum Institute.

HELP = Hydrologic Evaluation of Landfill Performance; The HELP model was used to calculate landfill infiltration rates for a representative subtitle D landfill with 2-foot earthen cover, and no liner or leachate collection system, using climatic data from 97 climatic stations located throughout the United States. These correspond to the reasonable worst case assumptions as explained in the HWIR Risk Assessment Background Document for the HWIR proposed notice 60 FR 66344 (December 21, 1995). Additional details on the methodologies used by the EPACMTP to derive DAFs for waste constituents modeled for the landfill scenario are presented in the Background Documents for the proposed HWIR rule. See 60 FR 66344 (December 21, 1995). The fraction of waste in the landfill is assigned a uniform distribution with lower and upper limits of 0.036 and 1.0, respectively, based on analysis of waste composition in Subtitle D landfills. The lower bound assures that the landfill will always contain a minimum amount of the waste of concern. The waste density is assigned a value based on reported densities of hazardous waste, and varies between 0.7 and 2.1 g/cm.[3]

ORD = U.S. EPA Office of Research and Development.

STORET = Database Utility for STORage and RETrieval of Chemical, Physical, and Biological Data for Water Quality.

USGS = U.S. Geological Survey.

4. Has the EPACMTP Methodology Been Formally Reviewed?

The Science Advisory Board (SAB), a public advisory group that provides information and advice to the EPA, reviewed the EPACMTP model as part of a continuing effort to provide improvements in the development and external peer review of environmental regulatory models. Overall, the SAB commended EPA for making significant enhancements to the EPACMTP's predecessor, the EPACML and for responding to previous SAB suggestions. The SAB also concluded that the mathematical formulation incorporating daughter products into the model appeared to be correct and that the site-based approach using hydrogeologic regions is superior to the previous approach used in EPACML. The model underwent public comment during the 1995 proposed HWIR. See 60 FR 66344 (December 21, 1995).

5. Has EPA Modified the EPACMTP as Used in the Proposed Hazardous Waste Identification Rule (HWIR)?

The EPACMTP, as developed for HWIR, determined the DAF using a Monte Carlo approach that selected, at random, a waste volume from a range of waste volumes identified in EPA's 1987 Subtitle D landfill survey. In delisting determinations, the waste volume of the petitioner is known. Therefore, application of EPACMTP to the delisting program has been modified to evaluate the specific waste volume, just as the original EPACML model was modified for delisting to derive DAFs related to waste volume from DAFs related to landfill area. EPA modified the DAFs determined under the HWIR proposal to account for a known waste volume. To generate waste volume-specific DAFs, EPA developed ''scaling factors'' to modify DAFs developed for HWIR (based on the entire range of waste disposal units) to DAFs for delisting waste volumes. This was accomplished by computing a 90th percentile DAF for a conservative chemical (a chemical that persists in the environment) for 10 specific waste volumes (ranging from 1,000 cubic yards to 300,000 cubic yards) for each waste management scenario (landfill and surface impoundment). EPA assumed that DAFs for a specific waste volume are linearly related to DAFs developed by EPACMTP for the HWIR. DAF scaling factors were computed for the ten increment waste volumes. Using these ten scaling factor DAFs, regression equations were developed for each waste management scenario to provide a continuum of DAF scaling factors as a function of waste volume.

The regression equations are coded into the DRAS program which then automatically adjusts the DAF for the waste volume of the petitioner.

The method used to verify the scaling factor approach is presented in the document, *Application of EPACMTP to Region 6 Delisting Program: Development of Waste Volume-Specific Dilution Attenuation Factors,* U.S. EPA, August 1996. For the landfill waste management scenario, the DAF scaling factors ranged from 9.5 for 10,000 cu.

yard to approximately 1.0 for waste volumes greater than 200,000 cu. yards. Therefore, for petitioned waste volumes greater than 200,000 cu. yards, the waste volume-specific DAF is the same as the DAF computed for the proposed HWIR. The regression equation that can be used to determine the DAF scaling factor (DSF) as a function of waste volume (in cubic yards) for the landfill waste management unit is: DSF = 6152.7* (waste volume) $^{-0.7135}$. The correlation coefficient of this regression equation is 0.99, indicating a good fit of this line to the data points.

6. What Modifications to the DRAS Have Been Made Since the Proposal in 65 FR 58015–58031, September 27, 2000?

Several revisions have been made to the DRAS program in order to improve the modeling. Specifically, the groundwater inhalation pathway was revised to reflect recent advances in modeling household inhalation from home water use (e.g., showering). The basis for estimating the concentration of constituents in the indoor air is based on the mass transfer of constituent from water to shower air. The initial version of DRAS used a fate and transport model described by McKone and Bogen (1992) [6] which predicted the highest waste concentration emitted from the water into the air during a given water use period (e.g., 10-minute shower). This method was revised to more accurately predict the average concentration occurring during the exposure event.

The revised model used in this analysis is based on the equations presented in McKone (1987) [7]. The shower model estimates the change in the shower (or bathroom or household) air concentration based on the mass of constituent lost by the water (fraction emitted or emission rate) and the air exchange rate between the various model compartments (shower, the rest of the bathroom, and the rest of the house). The resulting differential equations were solved using finite difference numerical integration. The average air concentration in the shower and bathroom are obtained by averaging the concentrations obtained for each time step over the duration of the exposure event (shower and bathroom use). These concentrations and the durations of daily exposure are used to estimate risk from inhalation exposures to residential use of groundwater. Further, improvements were made to more accurately reflect the transfer efficiency of the waste constituent from the groundwater to the air compartment. The fraction emitted from the bathroom or household water use is a function of the input transfer efficiency (or maximum fraction emitted) and the driving force for mass transfer (the differential between air saturation concentration at air/water interface and bulk air concentration). For example, in the shower compartment, the constituent emission rate is estimated from the change in the shower water concentration as the water falls through the air.

The shower emissions can be modeled based on falling droplets as a means of estimating the surface-area-to-volume ratio for mass transfer and the residence time of the water in the shower compartment, assuming the constituent concentration in the gas phase is constant over the time frame of the droplet fall. By assuming the drops fall at terminal velocity, the surface-area-to-volume ratio and the residence time can be determined based solely on droplet size. A droplet size of approximately 1 mm (0.1 cm) was selected. The terminal velocity for the selected droplet size is approximately 400 cm/s. The fraction of constituent emitted from a water droplet at any given time can then be calculated.

The equations used to predict surface volatilization from a landfill have been modified to more accurately reflect true waste concentration releases. The previous version of DRAS used Farmer's equation [8] to estimate the emission rate of volatiles from the surface of the landfill. Farmer's equation assumes that the emission originates as volatiles in liquids trapped in the pore spaces between solid particles of waste. The volatiles evaporate from the liquid and are emitted from the landfill following gaseous diffusion through the solid waste particles and soil cover to the surface of the landfill. Farmer's equation requires the mole fraction of a given volatile constituent in the liquid in order to calculate the emission. The previous version of DRAS used the TCLP value of a volatile constituent in the waste to approximate the mole fraction of a given constituent in the pore liquid. Since the TCLP test includes a 20-fold dilution, the calculation might underestimate the available concentration of volatiles in freshly deposited waste. The DRAS has been revised to use Shen's modification of Farmer's equation, described in U.S. EPA Office of Air Quality Planning and Standards' 1984 *Evaluation and Selection of Models for Estimating Air Emissions from Hazardous Waste Treatment, Storage, and Disposal Facilities,* EPA–450/3–84–020. Shen took the simplified version of Farmer's equation for vapor flux from a soil surface and converted it to an emission rate by multiplying it by the exposed landfill area. Shen's modification uses the total waste constituent concentration (weight fraction in the bulk waste) to approximate the mole fraction of that constituent in the liquid phase.

In estimating the amount of a given waste constituent that is released to surface water and eventually becomes freely dissolved in the water column, previous delisting petitions and the earlier version of the DRAS used the maximum observed TCLP concentration in waste as the total amount of the waste constituent available for erosion. Further, the former method assumed that all of the constituent mass that reached the stream, based on TCLP, became dissolved in the aqueous phase. Assuming complete conversion to a dissolved state is overly conservative and not in agreement with recent EPA methodology. In the revised DRAS, the total waste constituent concentration is used to estimate the constituent mass that reaches the stream. The portion of the waste constituent that becomes freely dissolved is determined by an estimate of partitioning between suspended solids and the aqueous phase. This methodology is described in U.S. EPA's 1998 *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities,* Volume One, Peer Review Draft, EPA530–D–98–001A (HHRAP).

Recent developments in mercury partitioning described in the Mercury Report to Congress led to another revision to the surface water pathway. The DRAS was modified to account for bioaccumulation of methyl mercury as a result of the release of mercury into the surface water column. The primary human health hazard posed by the release of mercury into surface water is through bioaccumulation of methyl mercury in fish followed by human consumption of the contaminated fish.

[6] McKone, T.E., and K.T. Bogen, 1992, ''Uncertainties in Health-Risk Assessment: An Integrated Case Study Based on Tetrachloroethylene in California Groundwater.'' Regulatory Toxicology and Parmacology, 15:86–103.

[7] McKone, T.E. 1987, ''Human Exposure to Volatile Organic Compounds in Household Tap Water. The Indoor Inhalation Pathway.'' Environmental Science and Technology, 21(12): 1194–1201.

[8] Farmer, W.J., MS. Yange and J. Letey. ''Land Disposal of Hexachlorobenzene Wastes Controlling Vapor Movement in Soils.'' In: *Land Disposal of Hazardous Wastes, Proceedings of the Fourth Annual Research Symposium.* Held at San Antonio, TX on March 6, 7 and 8. EPA–600/9–78–016. U.S. EPA Office of Research and Development, Municipal Environmental Research Laboratory, Cincinnati OH. August.

Biological processes in surface water cause the conversion, or methylation, of elemental mercury to methyl mercury. In accordance with the HHRAP, 15% of mercury in the water column is assumed to be converted to methyl mercury. This fraction is then used, along with the current bioaccumulation factor, to determine the predicted concentration of methyl mercury in fish tissue.

7. What Methods Is EPA Proposing To Use To Determine Delisting Levels for This Petitioned Waste?

BMW submitted to the EPA analytical data from its Greer, South Carolina plant and from the BMW plant in Dingolfing, Germany. Four composite samples of wastewater treatment sludge, from approximately 60 batches of wastewater, were collected from each plant, over a three-week period. A summary of analytical data is presented in Table 1B of section II below, with analytical details in the Table footnotes.

After reviewing the analytical data and information on processes and raw materials that BMW submitted in the delisting petition, EPA developed a list of constituents of concern and calculated delisting levels for them using MCLs and EPACML DAFs and calculated delisting levels and risks using DRAS and EPACMTP DAFs as described above. EPA requests public comment on these proposed methods of calculating delisting levels and risks for BMW's petitioned waste.

EPA also requests comment on three additional methods of evaluating BMW's delisting petition and determining delisting levels: (1) Use of the Multiple Extraction Procedure (MEP), SW–846 Method 1320,[9] to evaluate the long-term resistance of the waste to leaching in a landfill; (2) setting limits on total concentrations of constituents in the waste that are more conservative than results of calculations of constituent release from waste in a landfill to surface water and air, and release during waste transport; and (3) setting delisting levels at the Land Disposal Restrictions (LDR) Universal Treatment Standards (UTS) levels in 40 CFR 268.48. The UTS levels for BMW's constituents of concern are the following:

Barium: 21 mg/l TCLP; Cadmium: 0.11 mg/l TCLP; Chromium: 0.60 mg/l TCLP; Cyanide Total: 590 mg/kg; Cyanide Amenable 30 mg/kg; Lead: 0.75 mg/l TCLP; Nickel: 11 mg/l TCLP.

The EPA provides notice and an opportunity for comment before granting or denying a final exclusion. Thus, a final decision will not be made until all timely public comments (including those at public hearings, if any) on today's proposal are addressed.

II. Disposition of Delisting Petition

A. Summary of Delisting Petition Submitted by BMW Manufacturing Corporation, Greer, South Carolina (BMW)

BMW manufactures BMW automobiles, and is seeking a delisting for the sludge that will be generated by treating wastewater from its manufacturing operations, when aluminum will be used to replace some of the steel in the automobile bodies. Wastewater treatment sludge does not meet a hazardous waste listing definition when steel-only automobile bodies are manufactured. However, the wastewater treatment sludge generated at automobile manufacturing plants where aluminum is used as a component of automobile bodies, meets the listing definition of F019 in § 261.31.[10]

BMW petitioned EPA, Region 4, on June 2, 2000, to exclude this F019 waste, on a generator-specific basis, from the lists of hazardous wastes in 40 CFR part 261, subpart D.

The hazardous constituents of concern for which F019 was listed are hexavalent chromium and cyanide (complexed). BMW petitioned the EPA to exclude its F019 waste because BMW does not use either of these constituents in the manufacturing process. Therefore, BMW does not believe that the waste meets the criteria of the listing.

BMW claims that its F019 waste will not be hazardous because the constituents of concern for which F019 is listed will be present only at low concentrations and will not leach out of the waste at significant concentrations. BMW also believes that this waste will not be hazardous for any other reason (i.e., there will be no additional constituents or factors that could cause the waste to be hazardous). Review of this petition included consideration of the original listing criteria, as well as the additional factors required by the Hazardous and Solid Waste Amendments (HSWA) of 1984. See section 222 of HSWA, 42 U.S.C. 6921(f), and 40 CFR 260.22(d)(2)–(4). Today's proposal to grant this petition for delisting is the result of the EPA's evaluation of BMW's petition.

In support of its petition, BMW submitted: (1) Descriptions of its manufacturing and wastewater treatment processes, the generation point of the petitioned waste, and the manufacturing steps that will contribute to its generation; (2) Material Safety Data Sheets (MSDSs) for materials used to manufacture automobiles and to treat wastewater; (3) the minimum and maximum annual amounts of wastewater treatment sludge generated from 1996 through 1999, and an estimate of the maximum annual amount expected to be generated in the future; (4) results of analysis for metals, cyanide, sulfide, fluoride, and volatile organic compounds in the currently generated waste at the BMW plants in Greer, South Carolina, and Dingolfing, Germany; (5) results of the analysis of leachate obtained by means of the Toxicity Characteristic Leaching Procedure ((TCLP), SW–846 Method 1311), from these wastes; (6) results of the determinations for the hazardous characteristics of ignitability, corrosivity, and reactivity, in these wastes; (7) results of determinations of dry weight percent, bulk density, and free liquids in these wastes; and (8) results of the MEP analysis of the currently generated waste at the plant in Greer, South Carolina.

The BMW automobile assembly plant in Greer, South Carolina, manufactures automobiles for domestic consumption and for shipment to foreign markets. BMW's Standard Industrial Classification (SIC) code is 3711. The assembly plant operations include body welding, conversion coating, painting, final assembly, and shipment. The manufacturing process that will cause F019 to be generated is conversion coating, when applied to automobile bodies that contain aluminum. Conversion coating takes place in the plant's paint shop and treats the metal surface of each automobile body before painting to provide resistance to corrosion and to prepare the metal surface for optimum paint adhesion. Wastewater from all plant operations is treated at BMW's wastewater pretreatment plant which is located in an area of the paint shop. The wastewater is treated to meet the requirements of BMW's wastewater pretreatment permit before discharging the water to the publicly owned treatment works (POTW). Treatment results in the formation of insoluble

[9] ''SW–846'' means EPA Publication SW–846, ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.'' Methods in this publication are referred to in today's proposed rule as ''SW–846,'' followed by the appropriate method number.

[10] ''Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.''

metal hydroxides and phosphates. Wastewater treatment sludge is generated when these metal hydroxides and phosphates are dewatered in a filter press. The sludge that exits from the filter press will be classified as F019 when the automobile bodies contain aluminum, and the exit from the filter press will be the point of generation of F019.

BMW began generating wastewater treatment sludge from its Greer, South Carolina, assembly plant in 1994. From 1996 through 1999, BMW generated from 264 tons to 386 tons of wastewater treatment sludge per year. BMW estimated that production could increase to 1,600 vehicles per day in the next decade, and the generation rate of wastewater treatment sludge could reach 2,400 tons per year. BMW produces relatively large quantities of sludge because the company voluntarily removes phosphate from its wastewater in order to protect water quality in a recreational lake located downstream of the POTW discharge.

Table 1B below summarizes the hazardous constituents and their concentrations in BMW's wastewater treatment sludge generated from the manufacture of steel-only automobile bodies at the Greer, South Carolina, plant, and in the wastewater treatment sludge generated from the manufacture of automobile bodies containing steel and aluminum, at the BMW plant in Dingolfing, Germany.

TABLE 1B.—BMW MANUFACTURING CORPORATION, GREER, SOUTH CAROLINA, AND DINGOLFING, GERMANY: WASTEWATER TREATMENT SLUDGE PROFILE

Parameters[1]	1	2	3	4[2]	Max.	Mean	S.D.	C.V.[3] (percent)
Metals								
Barium:								
SC Plant	402	387 (383)	377	368	402	383.4	12.6	3.3
German Plant	144 (106)	116	120	121	144	121.4	14.0	11.5
Barium—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	NA	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	NA	NA	NA	NA
Cadmium:								
SC Plant	21.3	21.5 (21.1)	20.6	19.9	21.5	20.88	0.642	3.1
German Plant	3.77 (3.48)	3.26	ND	ND	3.77	3.42	0.22	6.5
Cadmium—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	NA	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	NA	NA	NA	NA
Chromium:								
SC Plant	202	222 (207)	213	201	222	209	8.69	4.2
German Plant	94.3 (84.2)	90.5	94.6	100	100	92.72	5.84	6.3
Chromium—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	NA	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	NA	NA	NA	NA
Lead:								
SC Plant	337	356 (348)	356	340	356	347	8.82	2.5
German Plant	1,920 (1,430)	1,540	1,490	1,240	1,920	1,524	248.9	16.3
Lead—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	NA	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	NA	NA	NA	NA
Nickel:								
SC Plant	1,400	1,660 (1,560)	1,710	1,500	1,710	1,566	124.0	7.9
German Plant	5,680 (5,350)	5,620	5,860	6,450	6,450	5,792	410.8	7.1
Nickel—TCLP:								
SC Plant	6.00	5.69 (5.80)	6.25	6.09	6.25	5.966	0.224	3.8
German Plant	0.73 (ND)	0.62	ND	ND	0.73	0.57	0.10	18.1
Zinc:								
SC Plant	15,000	15,100 (14,300)	14,000	13,300	15,100	14,300	743.6	5.2
German Plant	14,600 (12,500)	13,800	13,800	13,900	14,600	13,720	759.6	5.5
Zinc—TCLP:								
SC Plant	6.08	6.21 (6.07)	5.42	5.87	6.21	5.93	0.310	5.2
German Plant	ND (ND)	ND	ND	ND	NA	NA	NA	NA
Volatile Organic Compounds								
Acetone:								
SC Plant	5.950j	3.263j (1.432j)	3.372j	1.793j	5.950j	3.162	1.781	56.3
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Acetone—TCLP:								
SC Plant	8.28j	5.13j (0.0507j)	2.68j	1.34j	8.28j	3.50	3.27	93.4
German Plant	0.6067j (0.3581j)	1.563j	0.3090j	1.490j	1.563j	0.8654	0.6145	71.0
2-Butanone:								
SC Plant	1.055	1.122 (ND)	0.6889	0.2672	1.122	0.6623	0.4348	65.7
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
2-Butanone—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Ethylbenzene:								
SC Plant	0.6917j	0.5789j 0.2875j	0.1960j	0.7879j	0.7879j	0.5084	0.2564	50.4
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA

TABLE 1B.—BMW MANUFACTURING CORPORATION, GREER, SOUTH CAROLINA, AND DINGOLFING, GERMANY: WASTEWATER TREATMENT SLUDGE PROFILE—Continued

Parameters[1]	1	2	3	4[2]	Max.	Mean	S.D.	C.V.[3] (percent)
Ethylbenzene—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
4-Methyl-2-pentanone:								
SC Plant	0.4100	0.3089 (ND)	0.2843	0.1948	0.410	0.2753	0.0938	34.1
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
4-methyl-2-pentanone—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	0.0733	ND	ND	0.0733	NA	NA	NA
Toluene:								
SC Plant	ND	0.0211 (ND)	ND	ND	0.0211	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Toluene—TCLP:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Xylenes, total:								
SC Plant	2.4828j	2.144j (1.089j)	0.6871j	2.445j	2.4828j	1.7696	0.8276	46.8
German Plant	1.133 (1.000)	0.5667	1.233	1.050	1.233	0.997	0.256	25.7
Xylenes, total—TCLP:								
SC Plant	ND	ND (0.0038)	ND	ND	0.0038	NA	NA	NA
German Plant	0.0273 (0.0255)	0.0343	0.0297	0.0407	0.0407	0.0315	0.0061	19.4
Hazardous Waste Characteristics								
Corrosivity:								
SC Plant	No	No (No)	No	No	NA	NA	NA	NA
German Plant	No (No)	No	No	No	NA	NA	NA	NA
Ignitability:								
SC Plant	No	No (No)	No	No	NA	NA	NA	NA
German Plant	No (No)	No	No	No	NA	NA	NA	NA
Reactive Sulfide:								
SC Plant	153j	194j (32j)	52j	78j	194j	101.8	69.0	67.8
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Reactive Cyanide:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Inorganic Non-metals								
Total Cyanide:								
SC Plant	ND	2.05j (3.35j)	ND	ND	(3.35j)	2.28	0.599	26.3
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Amenable Cyanide:								
SC Plant	ND	ND (ND)	ND	ND	ND	NA	NA	NA
German Plant	ND (ND)	ND	ND	ND	ND	NA	NA	NA
Fluoride:								
SC Plant	8.6	9.7 (9.4)	11.7	13.7	13.7	10.62	2.07	19.5
German Plant	8.0j (9.2j)	8.4j	15.6j	15.5j	15.6j	11.3	3.87	34.2
Properties								
Dry Weight Percent:								
SC Plant	30	28 (28)	28	29	30	28.6	0.894	3.1
German Plant	30 (31)	30	30	30	31	30.2	0.447	1.5
Paint Filter Test[4]:								
SC Plant	Pass	Pass (Pass)	Pass	Pass	NA	NA	NA	NA
German Plant	Pass (Pass)	Pass	Pass	Pass	NA	NA	NA	NA

[1] Parameters are the chemicals or properties analyzed. Results for the two plants are in separate rows below the name of the chemical or property.

[2] The first set of results for each chemical shows the concentrations determined by total analysis of the samples in milligrams of chemical per kilogram of waste (mg/kg). The second set of results for each chemical shows the concentrations determined by analysis of the TCLP extracts of the samples in milligrams of chemical per liter of TCLP extract of the waste (mg/L). The TCLP results are just below the row where the name of the chemical is followed by ''—TCLP.'' ND = Not detected. NA = Not applicable. j = Parameter concentration estimated based on validation criteria. The metals, antimony, hexavalent chromium, silver, and vanadium, and the volatile organic compounds ethyl acetate, isobutanol, -butanol, and methanol were not detected by total analysis of samples from both plants and are not included in the table in order to save space. Numbers 1 through 4 in the table heading identify composite samples. Results in parentheses are for duplicate samples. As described in the petition, each composite sample is a mixture of six grab samples. Grab samples were used for total analysis of volatile organic chemicals.

[3] The last four columns contain a statistical analysis of the analytical results. Max. = maximum concentration found; Mean. = mean or average concentration found = sum of concentrations divided by the number of samples; S.D.= standard deviation = the square root of [(sum of squares of the differences between each measured concentration and the mean) divided by (the number of samples minus 1)]; C.V. = coefficient of variation, expressed as a percent = 100 times the standard deviation divided by the mean concentration. Statistical analyses were performed only if the parameter was detected in more han one sample. Detection limits reported by the laboratory were used in the statistical calculations when chemicals were not detected (ND). This is a conservative assumption, which is likely to result in overestimation of the mean concentration.

[4] ''Pass'' for the Paint Filter Test means that the sludge samples contained no free liquids.

EPA concluded after reviewing BMW's waste management and waste history information that no other hazardous constituents, other than those tested for, are likely to be present in BMW's petitioned waste. In addition, on the basis of test results and other information provided by BMW, pursuant to section 260.22, EPA concluded that the petitioned waste will not exhibit any of the characteristics of ignitability, corrosivity, or reactivity. See §§ 261.21, 261.22, and 261.23, respectively.

During its evaluation of BMW's petition, EPA also considered the potential impact of the petitioned waste on media other than groundwater. With regard to airborne dispersal of waste, EPA evaluated the potential hazards resulting from airborne exposure to waste contaminants from the petitioned waste using an air dispersion model for releases from a landfill. The results of this evaluation indicated that there is no substantial present or potential hazard to human health from airborne exposure to constituents from BMW's petitioned waste. (A description of EPA's assessment of the potential impact of airborne dispersal of BMW's petitioned waste is presented in the RCRA public docket for today's proposed rule.)

EPA evaluated the potential impact of the petitioned waste on surface water resulting from storm water runoff from a landfill containing the petitioned waste, and found that the waste would not present a threat to human health or the environment. (See the docket for today's proposed rule for a description of this analysis). In addition, EPA believes that containment structures at municipal solid waste landfills can effectively control runoff, as Subtitle D regulations (see 56 FR 50978, October 9, 1991) prohibit pollutant discharges into surface waters. While some contamination of surface water is possible through runoff from a waste disposal area, EPA believes that the dissolved concentrations of hazardous constituents in the runoff are likely to be lower than the extraction procedure test results reported in today's proposed rule, because of the aggressive acidic medium used for extraction in the TCLP. EPA also believes that, in general, leachate derived from the waste will not directly enter a surface water body without first traveling through the saturated subsurface where dilution of hazardous constituents may occur. Transported contaminants would be further diluted in the receiving water body. Subtitle D controls would minimize significant releases to surface water from erosion of undissolved particulates in runoff.

B. What Delisting Levels Did EPA Obtain With the EPACML Model and with DRAS?

In order to account for possible variability in the generation rate, EPA calculated delisting levels using a maximum generation rate of 2,400 tons per year. EPA converted the 2,400 tons to a waste volume of 2,850 cubic yards, by using BMW's conservative estimate that the density of the sludge is approximately equal to the density of water. While the sludge is certainly more dense than water, using the lower density results in a higher value for the waste volume, and a lower, more conservative, Dilution Attenuation Factor (DAF). Table 2 below is a table of waste volumes in cubic yards and the corresponding DAFs from the EPACML model. EPA obtained a DAF of 70 from Table 2, for BMW's petitioned waste.

TABLE 2.—DILUTION/ATTENUATION FACTORS (DAFS) FOR LANDFILLS CALCULATED BY THE EPACML MODEL, MODIFIED FOR DELISTING

Waste volume in cubic yards per year [1]	DAF (95th percentile) [2]
1,000	[3] 100
1,250	96
1,500	90
1,750	84
2,000	79
2,500	74
3,000	68
4,000	57
5,000	54
6,000	48
7,000	45
8,000	43
9,000	40
10,000	36
12,500	33
15,000	29
20,000	27
25,000	24
30,000	23
40,000	20
50,000	19
60,000	17
80,000	17
90,000	16

TABLE 2.—DILUTION/ATTENUATION FACTORS (DAFS) FOR LANDFILLS CALCULATED BY THE EPACML MODEL, MODIFIED FOR DELISTING—Continued

Waste volume in cubic yards per year [1]	DAF (95th percentile) [2]
100,000	15
150,000	14
200,000	13
250,000	12
300,000	12

[1] The waste volume includes a scaling factor of 20 (56 *FR* 32993, July 18, 1991; and 56 *FR* 67197, Dec. 30, 1991), where the annual volume of waste in the table is assumed to be sent to a landfill every year for 20 years.

[2] The DAFs calculated by the EPACML are a probability distribution based on a range of values for each model input parameter; the input parameters include such variables as landfill size, climatic data, and hydrogeologic data. The 95th percentile DAF represents a value in which one can have 95% confidence that a contaminant's concentration will be reduced by a factor equal to the DAF, as the contaminant moves from the bottom of the landfill through the subsurface environment to a receptor well. For example, if the 95th percentile DAF is 10, and the leachate concentration of cadmium at the bottom of the landfill is 0.05 mg/l, one can be 95% confident that the receptor well concentration of cadmium will not exceed 0.005 mg/l. See 55 *FR* 11826, March 29, 1990; 56 *FR* 32993, July 18, 1991; and 56 *FR* 67197, December 30, 1991.

[3] DAF cutoff is 100, corresponding to the Toxicity Characteristic Rule (55 *FR* 11826, March 29, 1990).

Table 3A below is a table of EPACML delisting levels for each constituent of concern in BMW's petitioned waste. The constituents of concern are barium, cadmium, chromium, cyanide, lead, and nickel, and the EPACML DAF is 70 for the maximum estimated volume.

TABLE 3A.—DELISTING LEVELS CALCULATED FROM EPACML MODEL FOR BMW PETITIONED WASTE

Constituent	MCL [1] (mg/l)	Delisting level (mg/l TCLP)
Barium	2	[2] 100
Cadmium	0.005	0.35
Chromium	0.10	[2] 5
Cyanide	0.20	[3] 14
Lead	[4] 0.015	1.05

TABLE 3A.—DELISTING LEVELS CALCULATED FROM EPACML MODEL FOR BMW PETITIONED WASTE—Continued

Constituent	MCL [1] (mg/l)	Delisting level (mg/l TCLP)
Nickel	[5] 0.73	51

[1] See the ''Docket Report on Health-based Levels and Solubilities Used in the Evaluation of Delisting Petitions, Submitted Under 40 CFR 260.20 and 260.22,'' December 1994, located in the RCRA public docket, for the Agency's methods of calculating health-based levels for evaluating delisting petitions from MCLs, and when MCLs are not available.

[2] The Toxicity Characteristic (TC) regulatory level in 40 CFR 261.24 for chromium is 5 mg/l and for barium is 100 mg/l. Therefore, for chromium, although a DAF of 70 times 0.10 equals 7, the delisting level cannot be greater than 5 mg/l because a delisted waste must not exhibit a hazardous characteristic. For the same reason, the delisting level for barium cannot be 70 times 2, equal to 140, but must not be greater than 100, the TC regulatory level for barium.

[3] The TCLP is to be followed for cyanide, except that deionized water must be used as the leaching medium, instead of the acetic acid or acetate buffer specified in the TCLP. SW–846 Method 9010 or 9012 must be used to measure cyanide concentration in the deionized water leachate.

[4] This value is an action level for a Publicly Owned Treatment Works, rather than a MCL.

[5] This value is a value that is protective of tap water, obtained from EPA Region 9's Preliminary Remediation Goals Tables. Internet address is: *http://www.epa.gov/region09/waste/sfund/prg/s1_05.htm*

Delisting levels and risk levels calculated by DRAS, using the EPACMTP model, are presented in Table 3B below. DRAS found that the major pathway for human exposure to this waste is groundwater ingestion, and calculated delisting and risk levels based on that pathway. The input values required by DRAS were the chemical constituents in BMW's petitioned waste; their maximum reported concentrations in the TCLP extract of the waste and in the unextracted waste (Values for the South Carolina plant in Table 1B, Preamble Section II.A.); the maximum annual volume to be disposed (2,850 cubic yards) in a landfill; the desired risk level, which was chosen to be no worse than 10^{-6} for carcinogens; and a hazard quotient of no greater than 1 for non-carcinogens. The only carcinogenic constituent in the waste is cadmium, and cadmium also has non-carcinogenic toxic effects. Allowable total concentrations in the waste, as calculated by DRAS for the waste, itself, not the TCLP leachate, were all at least 1,000 times greater than the actual maximum total concentrations found in the waste, and are not included in Table 3B, since many amount to metal or cyanide concentrations of several per cent. However, in addition to limits on the concentrations of constituents in the TCLP leachate of the petitioned waste, EPA does propose to set the following limits on total concentrations, in units of milligrams of constituent per kilogram of unextracted waste (mg/kg): Barium: 2,000; Cadmium: 500; Chromium: 1,000; Cyanide (Total, not Amenable): 200; Lead: 2,000; and Nickel: 20,000. EPA asks for public comment on these limits which were chosen to be both protective of human health and the environment and to be realistic, attainable values for wastewater treatment sludges that contain metals and cyanide. The maximum reported total concentrations for BMW's petitioned waste were all below these limits. The limit for cyanide was chosen so that the waste could not exhibit the reactivity characteristic for cyanide by exceeding the interim guidance for reactive cyanide of 250 mg/kg of releasable hydrogen cyanide (SW–846, Chapter Seven, Section 7.3.3.)

TABLE 3B.—DELISTING AND RISK LEVELS CALCULATED BY DRAS WITH EPACMTP MODEL FOR BMW PETITIONED WASTE

Constituent	Delisting level (mg/l of TCLP)	DAF	DRAS-calculated risk for maximum concentration carcinogen in waste	DRAS-calculated hazard quotient for maximum concentration of non-carcinogen in waste
Barium	[1] 182	69.2		4.87×10^{-2}
Cadmium	[1] 1.4	74.6	1.62×10^{-13}	3.57×10^{-2}
Chromium	[1] 5.39×10^{-5}	9,580		5.8×10^{-7}
Cyanide	33.6	44.8		1.49×10^{-3}
Lead	187	1.24×10^{-4}		Not calculable; no reference dose for lead
Nickel	70.3	93.5		8.9×10^{-2}
Total Hazard Quotient for All Waste Constituents.				0.187
Total Carcinogenic Risk for the Waste (due to Cadmium).			1.62×10^{-13}	

[1] These levels are all greater than the Toxicity Characteristic (TC) regulatory level in 40 CFR 261.24. A waste cannot be delisted if it exhibits a hazardous characteristic; therefore, the delisting level for each of these constituents could not be greater than the TC level of 100 for Barium; 1.0 for Cadmium; 5.0 for Chromium; and 5.0 for Lead.

EPA proposes to use the delisting levels in the TCLP leachate calculated by the older method using the EPACML DAF for BMW's petitioned waste, because the EPACML levels are more conservative for this waste. EPA requests public comment on the proposal to use the delisting levels obtained with the EPACML DAF instead of those calculated by the DRAS, using the EPACMTP, in combination with the limits on total concentrations proposed in the paragraph preceding Table 3B.

C. How Did EPA Use the Multiple Extraction Procedure (MEP) to Evaluate This Delisting Petition?

EPA developed the MEP test (SW–846 Method 1320) to help predict the long-term resistance to leaching of stabilized wastes, which are wastes that have been treated to reduce the leachability of hazardous constituents. The MEP consists of a TCLP extraction of a sample followed by nine sequential extractions of the same sample, using a synthetic acid rain extraction fluid (prepared by adding a 60/40 weight mixture of sulfuric acid and nitric acid to distilled deionized water until the pH is 3.0 ± 0.2). The sample which is subjected to the nine sequential extractions consists of the solid phase remaining after, and separated from, the initial TCLP extract. EPA designed the MEP to simulate multiple washings of

percolating rainfall in the field, and estimates that these extractions simulate approximately 1,000 years of rainfall. (See 47 FR 52687, Nov. 22, 1982.) MEP results are presented in Table 4 below. In response to a request by EPA for additional information, BMW reported the following practical quantitation limits in the MEP test: 0.001 mg/l for cadmium, 0.003 mg/l for lead, 0.01 mg/l for nickel, and 0.02 for zinc. Table 4 presents the results of analysis of MEP extracts.

The MEP data in Table 4 indicate that the petitioned waste would be expected to leach metals at low and decreasing concentrations for a period of at least 100 years, and only about 10 per cent of the amount of metal in the waste would leach during this time period. [11] The average life of a landfill is approximately 20 years. (See 56 FR 32993, July 18, 1991; and 56 FR 67197, Dec. 30, 1991.)

The MEP pH data in Table 4 indicate that the pH of the petitioned waste would be expected to lose its alkalinity over a period of years. However, the amount of metal in the leachate remains similar to or lower than the initial TCLP results, and decreases over time.

TABLE 4.—MULTIPLE EXTRACTION PROCEDURE (SW–846 METHOD 1320) RESULTS FOR BMW'S PETITIONED WASTE [1]

Extract No.	Cadmium (Cd)	Lead (Pb)	Nickel (Ni)	Zinc (Zn)	pH [2] (before/after)
1 (TCLP)	0.001	0.157	5.22	4.02	8.0/5.7
2 (first extraction of the MEP)	[1] 0.001 U	0.003 U	0.299	0.165	5.6/6.5
3	0.001 U	0.003 U	0.234	0.088	5.4/6.6
4	0.001 U	0.003 U	0.654	3.25	3.0/6.6
5	0.001 U	0.003 U	0.267	5.61	3.0/3.9
6	0.001 U	0.007	0.084	1.47	3.5/3.9
7	0.001	0.003 U	0.059	0.603	3.2/3.3
8	0.001 U	0.003 U	0.018	0.222	3.1/3.2
9	0.001 U	0.003	0.028	0.139	2.9/3.1
10	0.001 U	0.003 U	0.010 U	0.073	3.0/3.3

[1] U = Not detected to level shown.
[2] pH is a measure of the negative logarithm of the hydrogen ion activity in an aqueous solution, and is a measure of how acidic or basic (alkaline) a solution is. At 25°C, solutions with pH values less than 7 are acidic; greater than 7 are basic (alkaline); and a pH value of 7 indicates a neutral solution. In general, metals and their compounds are less soluble in basic (alkaline) solutions. ''Start'' means pH at start of the extraction and ''Finish'' means pH at the end of the extraction.

D. Conclusion

After reviewing BMW's processes, the EPA concludes that (1) no hazardous constituents of concern are likely to be present in BMW's waste at levels that would harm human health and the environment; and (2) the petitioned waste does not exhibit any of the characteristics of ignitability, corrosivity, or reactivity. See 40 CFR 261.21, 261.22, and 261.23, respectively.

EPA believes that BMW's petitioned waste will not harm human health and the environment when disposed in a nonhazardous waste landfill if the delisting levels for land disposal as proposed in Preamble section II.B. are met.

EPA proposes to exclude BMW's petitioned waste from being listed as F019, based on descriptions of waste management and waste history, evaluation of the results of waste sample analysis, and on the requirement that BMW's petitioned waste must meet proposed delisting levels before disposal. Thus, EPA's proposed decision is based on verification testing conditions. If the proposed rule becomes effective, the exclusion will be valid only if the petitioner demonstrates that the petitioned waste meets the verification testing conditions and delisting levels in the amended Table 1 of appendix IX of 40 CFR part 261. If the proposed rule becomes final and EPA approves that demonstration, the petitioned waste would not be subject to regulation under 40 CFR parts 262 through 268 and the permitting standards of 40 CFR part 270. Although management of the waste covered by this petition would, upon final promulgation, be relieved from Subtitle C jurisdiction, the waste would remain a solid waste under RCRA. As such, the waste must be handled in accordance with all applicable Federal, State, and local solid waste management regulations. Pursuant to RCRA section 3007, EPA may also sample and analyze the waste to determine if delisting conditions are met.

III. Limited Effect of Federal Exclusion

Will This Rule Apply in All States?

This proposed rule, if promulgated, would be issued under the Federal (RCRA) delisting program. States, however, are allowed to impose their own, non-RCRA regulatory requirements that are more stringent than EPA's, pursuant to section 3009 of RCRA. These more stringent requirements may include a provision which prohibits a Federally issued exclusion from taking effect in the States. Because a petitioner's waste may be regulated under a dual system (i.e., both Federal and State programs), petitioners are urged to contact State regulatory authorities to determine the current status of their wastes under the State laws. Furthermore, some States are authorized to administer a delisting program in lieu of the Federal program, i.e., to make their own delisting decisions. Therefore, this proposed exclusion, if promulgated, would not apply in those authorized States. If the petitioned waste will be transported to any State with delisting authorization, BMW must obtain delisting authorization from that State before the waste may be managed as nonhazardous in that State.

IV. Effective Date

This rule, if made final, will become effective immediately upon final publication. The Hazardous and Solid Waste Amendments of 1984 amended section 3010 of RCRA to allow rules to become effective in less than six months when the regulated community does not need the six-month period to come into compliance. That is the case here, because this rule, if finalized, would reduce the existing requirements for the

[11] This estimate is based on the following calculation for nickel: % nickel leached out over more than 100 years = 100 × (total number of milligrams of nickel in all the sample MEP extracts) ÷ the number of milligrams of nickel in the 100-gram sample that was extracted by the MEP: 100 × 2 × (5.22 +0.299 + 0.234 + 0.654 + 0.267 + 0.084 + 0.059+ 0.018+ .028+ .01) ÷ 140 = 100 × 13.746 ÷140 = 9.8%.

petitioner. In light of the unnecessary hardship and expense that would be imposed on this petitioner by an effective date six months after publication and the fact that a six-month deadline is not necessary to achieve the purpose of section 3010, EPA believes that this exclusion should be effective immediately upon final publication. These reasons also provide a basis for making this rule effective immediately, upon final publication, under the Administrative Procedure Act, pursuant to 5 U.S.C. 553(d).

V. Paperwork Reduction Act

Information collection and record-keeping requirements associated with this proposed rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (Public Law 96–511, 44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2050–0053.

VI. 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 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 proposed rulemaking involves environmental monitoring or measurement. Consistent with the Agency's Performance Based Measurement System (''PBMS''), EPA proposes not to require the use of specific, prescribed analytical methods, except when required by regulation in 40 CFR parts 260 through 270. Rather the Agency plans to allow the use of any method that meets the prescribed performance criteria. The PBMS approach is intended to be more flexible and cost-effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified.

VII. Unfunded Mandates Reform Act

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''UMRA''), Public Law 104–4, which was signed into law on March 22, 1995, EPA generally must prepare a written statement for rules with Federal mandates that may result in estimated costs to State, local, and tribal governments in the aggregate, or to the private sector, of $100 million or more in any one year. When such a statement is required for EPA rules, under section 205 of the UMRA EPA must identify and consider alternatives, including the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. EPA must select that alternative, unless the Administrator explains in the final rule why it was not selected or it is inconsistent with law. Before EPA establishes regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must develop 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.

The UMRA generally defines a Federal mandate for regulatory purposes as one that imposes an enforceable duty upon State, local, or tribal governments or the private sector. EPA finds that today's proposed delisting decision is deregulatory in nature and does not impose any enforceable duty on any State, local, or tribal governments or the private sector. In addition, the proposed delisting does not establish any regulatory requirements for small governments and so does not require a small government agency plan under UMRA section 203.

VIII. Regulatory Flexibility Act, as Amended by the Small Business Regulatory Enforcement and Fairness 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 Administrator or delegated representative certifies that the rule will not have a significant economic impact on a substantial number of small entities.

This rule, if promulgated, will not have an adverse economic impact on any small entities since its effect would be to reduce the overall costs of EPA's hazardous waste regulations and would be limited to one facility. Accordingly, I hereby certify that this proposed regulation, if promulgated, will not have a significant economic impact on a substantial number of small entities. This regulation, therefore, does not require a regulatory flexibility analysis.

IX. Executive Order 12866

Under Executive Order 12866, (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is ''significant'' and therefore subject to Office of Management and Budget (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 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 exempted this proposed rule from the requirement for OMB review under section (6) of Executive Order 12866.

X. Executive Order 13045

The Executive Order 13045 is entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This order applies to any rule that EPA determines (1) Is economically significant as defined under Executive Order 12866, and (2) the environmental health or safety risk addressed by the rule has 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 rule is not subject to Executive Order 13045 because this is not an economically significant regulatory action as defined by Executive Order 12866.

XI. Executive Order 13084

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly affects 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. If the mandate is unfunded, EPA must 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, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to meaningful and timely input'' in the development of regulatory policies on matters that significantly or uniquely affect their communities of Indian tribal governments. Today's proposed rulemaking does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this proposed rule.

XII. Submission to Congress and General Accounting Office

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 Congress and to the Comptroller General of the United States.

The EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability, etc. Section 804 exempts from section 801 the following types of rules: rules of particular applicability; rules relating to agency management or personnel; and rules of agency organization, procedures, or practice that do not substantially affect the rights or obligations of non-agency parties. See 5 U.S.C. 804(3). This rule will become effective on the date of publication as a final rule in the **Federal Register**.

XIII. Executive Order 13132

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'' is 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.''

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that impose substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This action does not have federalism implication. It will not have a substantial direct effect on 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, because it affects only one facility.

List of Subjects in 40 CFR Part 261

Hazardous waste, Recycling, Reporting and recordkeeping requirements.

Authority: Sec. 3001(f) RCRA, 42 U.S.C. 6921(f).

Dated: January 4, 2001.

Jewell Grubbs,

Acting Director, Waste Management Division.

For the reasons set out in the preamble, 40 CFR part 261 is proposed to be amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

2. In Table 1 of appendix IX, part 261 add the following wastestream in alphabetical order by facility to read as follows:

Appendix IX—Wastes Excluded Under §§ 260.20 and 260.22.

TABLE 1.—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES

Facility	Address	Waste description
*	*	*
BMW Manufacturing Corporation.	Greer, South Carolina	Wastewater treatment sludge (EPA Hazardous Waste No. F019) that BMW Manufacturing Corporation (BMW) generates by treating wastewater from automobile assembly plant located on Highway 101 South in Greer, South Carolina. This is a conditional exclusion for up to 2,850 cubic yards of waste (hereinafter referred to as ''BMW Sludge'') that will be generated each year and disposed in a Subtitle D landfill after [insert date of final rule.] With prior approval by the EPA, following a public comment period, BMW may also beneficially reuse the sludge. BMW must demonstrate that the following conditions are met for the exclusion to be valid.

TABLE 1.—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES—Continued

Facility	Address	Waste description
		(1) *Delisting Levels:* All leachable concentrations for these metals and cyanide must not exceed the following levels (ppm): Barium—100; Cadmium—0.35; Chromium—5; Cyanide—14, Lead—1.05; and Nickel—51. These metal and cyanide concentrations must be measured in the waste leachate obtained by the method specified in 40 CFR 261.24, except that for cyanide, deionized water must be the leaching medium. The total concentration of cyanide (total, not amenable) in the waste, not the waste leachate, must not exceed 200 mg/kg. Cyanide concentrations in waste or leachate must be measured by the method specified in 40 CFR 268.40, Note 7. The total concentrations of metals in the waste, not the waste leachate, must not exceed the following levels (ppm): Barium—2,000; Cadmium—500; Chromium—1,000; Lead—2,000; and Nickel—20,000. (2) *Verification Testing Requirements:* Sample collection and analyses, including quality control procedures, must be performed according to SW–846 methodologies, where specified by regulations in 40 CFR Parts 260–270. Otherwise, methods must meet Performance Based Measurement System Criteria in which the Data Quality Objectives are to demonstrate that representative samples of the BMW Sludge meet the delisting levels in Condition (1). (A) *Initial Verification Testing:* BMW must conduct verification sampling initially when test runs of aluminum vehicle parts are run and again when production of vehicles with aluminum body parts commences. For verification sampling during the test runs, BMW must collect and analyze a minimum of four composite samples of the dewatered sludge that is generated from wastewater treated during the time of the test runs. For verification sampling at the initiation of the production of vehicle models with aluminum parts, BMW must collect a minimum of four composite samples from the first roll-off box of sludge generated after production of automobiles with aluminum parts reaches 50 units per day. BMW must analyze for the constituents listed in Condition (1). If BMW chooses to beneficially reuse sludge, and the reuse has been approved by EPA, following a public comment period, verification testing of the sludge must consist of analyzing a minimum of four composite samples of the sludge for the constituents listed in Condition (1). (B) *Subsequent Verification Testing:* If the initial verification testing in Condition (2)(A) is successful for both the test runs and the commencement of production, i.e., delisting levels of Condition (1) are met for all of the composite samples, BMW must implement an annual testing program to demonstrate that constituent concentrations measured in the TCLP extract and total concentrations measured in the unextracted waste do not exceed the delisting levels established in Condition (1). (3) *Waste Holding and Handling:* BMW must store as hazardous all BMW Sludge generated until verification testing, as specified in Condition (2)(A), is completed and valid analyses demonstrate that Condition (1) is satisfied. If the levels of constituents measured in the composite samples of BMW Sludge do not exceed the levels set forth in Condition (1), then the BMW Sludge is non-hazardous and must be managed in accordance with all applicable solid waste regulations. If constituent levels in a composite sample exceed any of the delisting levels set forth in Condition (1), the batch of BMW Sludge generated during the time period corresponding to this sample must be managed and disposed of in accordance with Subtitle C of RCRA. (4) *Changes in Operating Conditions:* BMW must notify EPA in writing when significant changes in the manufacturing or wastewater treatment processes are implemented. EPA will determine whether these changes will result in additional constituents of concern. If so, EPA will notify BMW in writing that the BMW Sludge must be managed as hazardous waste F019 until BMW has demonstrated that the wastes meet the delisting levels set forth in Condition (1) and any levels established by EPA for the additional constituents of concern, and BMW has received written approval from EPA. If EPA determines that the changes do not result in additional constituents of concern, EPA will notify BMW, in writing, that BMW must verify that the BMW Sludge continues to meet Condition (1) delisting levels.

TABLE 1.—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES—Continued

Facility	Address	Waste description
		(5) *Data Submittals:* Data obtained in accordance with Condition (2)(A) must be submitted to Jewell Grubbs, Chief, RCRA Enforcement and Compliance Branch, Mail Code: 4WD–RCRA, U.S. EPA, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, Atlanta, Georgia 30303. This submission is due no later than 60 days after filling the first roll-off box of BMW Sludge to be disposed in accordance with delisting Conditions (1) through (7) for both the test runs and again for the commencement of production. Records of analytical data from Condition (2) must be compiled, summarized, and maintained by BMW for a minimum of three years, and must be furnished upon request by EPA or the State of South Carolina, and made available for inspection. Failure to submit the required data within the specified time period or maintain the required records for the specified time will be considered by EPA, at its discretion, sufficient basis to revoke the exclusion to the extent directed by EPA. All data must be accompanied by a signed copy of the certification statement in 40 CFR 260.22(i)(12). (6) *Reopener Language:* (A) If, at any time after disposal of the delisted waste, BMW possesses or is otherwise made aware of any environmental data (including but not limited to leachate data or groundwater monitoring data) or any other data relevant to the delisted waste indicating that any constituent identified in the delisting verification testing is at a level higher than the delisting level allowed by EPA in granting the petition, BMW must report the data, in writing, to EPA within 10 days of first possessing or being made aware of that data. (B) If the testing of the waste, as required by Condition (2)(B), does not meet the delisting requirements of Condition (1), BMW must report the data, in writing, to EPA within 10 days of first possessing or being made aware of that data. (C) Based on the information described in paragraphs (6)(A) or (6)(B) and any other information received from any source, EPA will make a preliminary determination as to whether the reported information requires that EPA take action to protect human health or the environment. Further action may include suspending or revoking the exclusion, or other appropriate response necessary to protect human health and the environment. (D) If EPA determines that the reported information does require Agency action, EPA will notify the facility in writing of the action believed necessary to protect human health and the environment. The notice shall include a statement of the proposed action and a statement providing BMW with an opportunity to present information as to why the proposed action is not necessary. BMW shall have 10 days from the date of EPA's notice to present such information. (E) Following the receipt of information from BMW, as described in paragraph (6)(D), or if no such information is received within 10 days, EPA will issue a final written determination describing the Agency actions that are necessary to protect human health or the environment, given the information received in accordance with paragraphs (6)(A) or (6)(B). Any required action described in EPA's determination shall become effective immediately, unless EPA provides otherwise. (7) *Notification Requirements:* BMW must provide a one-time written notification to any State Regulatory Agency in a State to which or through which the delisted waste described above will be transported, at least 60 days prior to the commencement of such activities. Failure to provide such a notification will result in a violation of the delisting conditions and a possible revocation of the decision to delist.
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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 20 and 22

[WT Docket No. 01–14; FCC 01–28]

2000 Biennial Regulatory Review—Spectrum Aggregation Limits for Commercial Mobile Radio Services

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, we open a proceeding to reexamine the need for Commercial Mobile Radio Services (CMRS) spectrum aggregation limits. Specifically, we seek comment on whether the CMRS spectrum cap and the cellular cross-interest rule should be eliminated, modified, or retained, based on the public interest standard set forth under section 11 of the Communications Act.

DATES: Comments are due on or before April 13, 2001 and reply comments are due on or before March 14, 2001.

ADDRESSES: Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Michael Rowan, Wireless Telecommunications Bureau, at (202) 418–7240.

SUPPLEMENTARY INFORMATION: This is a summary of the Federal Communications Commission's Notice of Proposed Rulemaking (NPRM), FCC 01–28, in WT Docket No. 01–14, adopted on January 19, 2001 and released on January 23, 2001. The full text of this NPRM is available for inspection and copying during normal