ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SW–FRL–7025–3]

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

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is granting a petition submitted by Eastman Chemical Corporation—Texas Operations (Eastman Chemical) to exclude from hazardous waste control (or delist) a certain solid waste. This final rule responds to the petition submitted by Eastman Chemical to delist the dewatered wastewater treatment sludge on a ''generator specific'' basis from the lists of hazardous waste.

After careful analysis, the EPA has concluded that the petitioned waste is not hazardous waste when disposed of in Subtitle D landfills. This exclusion applies to dewatered wastewater treatment sludge generated at Eastman Chemical's Longview, Texas facility. Accordingly, this final rule excludes the petitioned waste from the requirements of hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA) when disposed of in Subtitle D landfills but imposes testing conditions to ensure that the future-generated wastes remain qualified for delisting.

EFFECTIVE DATE: August 16, 2001.

ADDRESSES: The public docket for this final rule is located at the U.S. Environmental Protection Agency Region 6, 1445 Ross Avenue, Dallas, Texas 75202, and is available for viewing in the EPA Freedom of Information Act review room on the 7th floor from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Call (214) 665–6444 for appointments. The reference number for this docket is ''F–00–TXDEL–TXEASTMAN''. 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.

FOR FURTHER INFORMATION CONTACT: For general information, contact Bill Gallagher, at (214) 665–6775. For technical information concerning this document, contact Michelle Peace, U.S. Environmental Protection Agency, 1445 Ross Avenue, Dallas, Texas, (214) 665–7430.

SUPPLEMENTARY INFORMATION: The information in this section is organized as follows:

I. Overview Information

A. What Action Is EPA Finalizing?

The EPA is finalizing:

(1) the decision to grant Eastman's petition to have its wastewater treatment sludge excluded, or delisted, from the definition of a hazardous waste, subject to certain continued verification and monitoring conditions; and

(2) to use the Delisting Risk Assessment Software to evaluate the potential impact of the petitioned waste on human health and the environment. The Agency used this model to predict the concentration of hazardous constituents released from the petitioned waste, once it is disposed.

After evaluating the petition, EPA proposed, on December 4, 2000 to exclude the Eastman Chemical waste from the lists of hazardous wastes under §§ 261.31 and 261.32 (see 65 FR 75637, December 4, 2000)

B. Why Is EPA Approving This Delisting?

Eastman's petition requests a delisting for listed hazardous wastes. Eastman does not believe that the petitioned waste meets the criteria for which EPA listed it. Eastman also believes no additional constituents or factors could cause the waste to be hazardous. EPA's review of this petition included consideration of the original listing criteria, and the additional factors required by the Hazardous and Solid Waste Amendments of 1984 (HSWA). See section 3001(f) of RCRA, 42 U.S.C. 6921(f), and 40 CFR 260.22 (d)(1)-(4). In making the final delisting determination, EPA evaluated the petitioned waste against the listing criteria and factors cited in §§ 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 the EPA had found, based on this review, that the waste remained hazardous based on the factors for which the waste were originally listed, EPA would have proposed to deny the petition.) The EPA 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. The EPA considered whether the waste is acutely toxic, 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. The EPA believes that the petitioned waste does not meet these criteria. EPA's final decision to delist waste from Eastman's facility is based on the information submitted in support of this rule, i.e., descriptions of the waste water treatment system, incinerator, and analytical data from the Longview facility.

C. What Are the Limits of This Exclusion?

This exclusion applies to the waste described in the petition only if the requirements described in Table 1 of part 261, Appendix IX and the conditions contained herein are satisfied. The maximum annual volume of the dewatered wastewater treatment sludge is 82,100 cubic yards.

D. How Will Eastman Chemical Manage the Waste if It Is Delisted?

Eastman currently disposes of the petitioned waste (wastewater treatment sludge) generated at its facility in an on-site, state permitted solid waste landfill after the sludge has been incinerated. The ash from the incineration process was delisted by EPA in June 1996. As a delisted material, it will meet the criteria for disposal in a Subtitle D landfill without incineration.

The incinerator is a RCRA Subtitle C regulated unit permitted by the Texas Natural Resource Conservation

Commission. This final decision will not affect the current regulatory controls on the incineration unit.

E. When Is the Final Delisting Exclusion Effective?

This rule is effective August 16, 2001. 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 reduces, rather than increases, the existing requirements for persons generating hazardous wastes. These reasons also provide a basis for making this rule effective immediately, upon publication, under the Administrative Procedure Act, pursuant to 5 U.S.C. 553(d).

F. How Does This Final Rule Affect States?

Because EPA is issuing this exclusion under the Federal RCRA delisting program, only states subject to Federal RCRA delisting provisions would be affected. This would exclude two categories of States: States having a dual system that includes Federal RCRA requirements and their own requirements, and States who have received our authorization to make their own delisting decisions.

Here are the details: We allow states to impose their own non-RCRA regulatory requirements that are more stringent than EPA's, under section 3009 of RCRA. These more stringent requirements may include a provision that prohibits a Federally issued exclusion from taking effect in the State. Because a dual system (that is, both Federal (RCRA) and State (non-RCRA) programs) may regulate a petitioner's waste, we urge petitioners to contact the State regulatory authority to establish the status of their wastes under the State law.

EPA has also authorized some States (for example, Louisiana, Georgia, Illinois) to administer a delisting program in place of the Federal program, that is, to make State delisting decisions. Therefore, this exclusion does not apply in those authorized States. If Eastman Chemical transports the petitioned waste to or manages the waste in any State with delisting authorization, Eastman Chemical must obtain delisting authorization from that State before they can manage the waste as nonhazardous in the State.

II. Background

A. What Is a Delisting Petition?

A delisting petition is a request from a generator to EPA or another agency with jurisdiction to exclude from the list of hazardous wastes, wastes the generator does not consider hazardous under RCRA.

B. What Regulations Allow Facilities To Delist a Waste?

Under 40 CFR 260.20 and 260.22, facilities may petition the EPA to remove their wastes from hazardous waste control by excluding them from the lists of hazardous wastes contained in §§ 261.31 and 261.32. Specifically, § 260.20 allows any person to petition the Administrator to modify or revoke any provision of Parts 260 through 266, 268 and 273 of Title 40 of the Code of Federal Regulations. Section 260.22 provides generators the opportunity to petition the Administrator to exclude a waste on a ''generator-specific'' basis from the hazardous waste lists.

C. What Information Must the Generator Supply?

Petitioners must provide sufficient information to EPA to allow the EPA to determine that the waste to be excluded does not meet any of the criteria under which the waste was listed as a hazardous waste. In addition, 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.

III. EPA's Evaluation of the Waste Data

A. What Waste Did Eastman Chemical Petition EPA To Delist?

On February 4, 2000, Eastman petitioned the EPA to exclude from the lists of hazardous waste contained in §§ 261.31 and 261.32, a waste by-product (dewatered sludge from the wastewater treatment plant) which falls under the classification of listed waste because of the ''derived from'' rule in RCRA 40 CFR 261.3(c)(2)(i). Specifically, in its petition, Eastman Chemical Company, Texas Operations, located in Longview, Texas, requested that EPA grant an exclusion for 82,100 cubic yards per year of dewatered sludge resulting from its hazardous waste treatment process. The resulting waste is listed, in accordance with § 261.3(c)(2)(i) (i.e., the ''derived from'' rule). The waste codes of the constituents of concern are EPA Hazardous Waste Nos. F001, F002, F003, F005, K009, K010, U001, U002, U028, U031, U069, U088, U112, U115, U117, U122, U140, U147, U154, U159, U161, U220, U226, U239 and U359. Table 1 lists the constituents of concern for these waste codes.

TABLE 1.—HAZARDOUS WASTE CODES ASSOCIATED WITH WASTE STREAMS

Waste code	Basis for characteristics/listing
F001—Spent halogented solvents used in degreasing.	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons
F002—Spent halogented solvents	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trichlorofluoroethane, ortho-dichlorobenzene, trichlorofluoromethane
F003—Spent non-halogented solvents	Not applicable
F005—Spent non-halogented solvents	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane
K009—Distillation bottoms from the production of acetaldehyde from ethylene.	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid
K010—Distillation side cuts from the production of acetaldehyde from ethylene.	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde
U001	Acetaldehyde
U002	Acetone
U028	Bis(2-ethylhexyl) phthalate
U031	n-Butyl alcohol
U069	Dibutyl phthalate

TABLE 1.—HAZARDOUS WASTE CODES ASSOCIATED WITH WASTE STREAMS—Continued

Waste code	Basis for characteristics/listing
U088	Di-ethyl phthalate
U112	Ethyl acetate
U115	Ethylene Oxide
U117	Ethyl ether
U122	Formaldehyde
U140	Isobutyl alcohol
U147	Maleic anhydride
U154	Methanol
U159	Methyl ethyl ketone
U161	Methyl isobutyl ketone
U220	Toluene
U226	1,1,1 Trichloroethane (Methyl chloroform)
U239	Xylene
U359	Ethylene Glycol monoethyl ether

B. How Much Waste Did Eastman Chemical Propose To Delist?

Specifically, in its petition, Eastman Chemical requested that EPA grant a standard exclusion for 82,100 cubic yards of dewatered wastewater treatment sludge generated per calender year.

C. How Did Eastman Chemical Sample and Analyze the Waste Data in This Petition?

To support its petition, Eastman submitted:

(1) descriptions of its waste water treatment system associated with petitioned wastes;

(2) results of the total constituent list for 40 CFR Part 264 Appendix IX volatiles, semivolatiles, and metals except pesticides, herbicides, and PCBs;

(3) results of the constituent list for Appendix IX on Toxicity Characteristic Leaching Procedure (TCLP) extract for volatiles, semivolatiles, and metals;

(4) results for reactive sulfide,

(5) results for reactive cyanide;

(6) results for pH;

(7) results of the metals concentrations using multiple pH extraction fluids;

(8) information and results from testing of the fluidized bed incinerator's compliance testing and

(9) results from oil and grease analysis.

IV. Public Comments Received on the Proposed Exclusion

A. Who Submitted Comments on the Proposed Rule?

The EPA received public comments on December 4, 2000, proposal from three interested parties, General Motors, Delphi Automotive, and Eastman Chemical Company.

B. Request for Clarification of Preamble Language and Provisions in Table 1 of Appendix IX of Part 261.

Eastman comments that the language in the preamble of the rules may be interpreted more strictly than the language in the exclusion.

For purposes of compliance with the exclusion in Table 1 of Appendix 1 of part 261, if Eastman significantly changes the process which generate(s) the waste(s) and which may or could affect the composition or type waste(s) generated as established under Condition (1) (by illustration, but not limitation, change in equipment or operating conditions of the treatment process). Eastman must (A) notify the EPA in writing of the change and (B) may no longer handle or manage the waste generated from the new process as nonhazardous until Eastman has demonstrated through testing the waste meets the delisting levels set in Condition (1) and (C) Eastman has received written approval to begin managing the wastes as non-hazardous from EPA. The Agency will revise Condition 4 of Table 1 of Appendix IX of part 261 to reflect this change.

Eastman also comments that the text in Item 1 of Table 1 could be misinterpreted.

There is a typo in Item 1 of Table 1 (65 FR 75649, December 4, 2000). The delisting level of 2-butanone is listed as 42.8 but should be 48.2 in accordance with Table III of the preamble. The Agency has rechecked the values from the Delisting Risk Assessment Software (DRAS) and notes the correct concentration limit is 42.8 mg/l for 2-butanone.

C. Comments on the Delisting Risk Assessment Software

Delphi Automotive generally supports the Eastman Chemical Company's Delisting Petition to delist its sludge but has extensive comments on the Delisting Risk Assessment Software. Delphi comments that the ease of use and simplicity for inputting two variables into the model has resulted in a model that is not designed to be a site-specific model but rather is waste generator specific. Hence, any site specific factors such as hydrogeology, climate, ecology, population density, etc. cannot be incorporated as modifiers of release or risk estimates. This leaves the model inflexible, not representative, and leads to an overestimation of releases and risk. Delphi goes on to identify concerns and questions regarding the Delisting Risk Assessment model. Delphi and GM list their concerns in the areas of (1) assumptions regarding the landfill; minimal cover; criteria applied regarding risk levels; the TCLP; unlikely risk scenarios; undocumented sensitivity analysis; issues surrounding Nickel; and notice and review issues.

Information on the Risk and Hazard Assessment can be found in Chapter 4 of the DTSD. A discussion of criteria and the method for quantifying of risk is provided in Chapter 4.

The Delisting Program in its history has never focused on site-specific conditions. It has since its inception been a program specifically for waste generators. A review of the 40 CFR 260.22 indicates that these are petitions to amend part 261 to exclude a waste produced at a particular facility. The Agency is not currently using the model to predict site-specific results. Since disposal of the delisted waste may occur at any landfill in the United States, site-specific considerations are not usually given. The DRAS model is based on

national averages of the site specific factors and is intended to model a reasonable worst case scenario for disposal.

The Agency continues to review chemical-specific parameter data. Where appropriate, these data will be incorporated into the DRAS analyses. However, as explained above, in delisting analyses, site specific characteristics (beyond waste constituent concentration and volume) are not incorporated into analyses. Default values are given for many parameters used in risk. The Agency can not fully evaluate how release mechanisms and exposure scenarios may be impacted because the final disposal location remains undefined. See Tenneco Automotive Proposed Rule, 66 FR 24088, May 11, 2001 and the proposed Rule for Bekaert Steel Corporation in Rogers, AR, 61 FR 32748, June 25, 1996.

Delphi comments that the DRAS assumes that landfill is unlined and that leaching occurs from the beginning which is counter to performance standard and use of liners, covers & slurry walls. The assumption of no liner is not consistent with CMTP which assumes a liner. The DRAS model should allow for the option of including a liner and should use Subtitle D landfill characteristics.

There are existing solid waste landfills which have no liner. Over time, liners also fail, delistings do not currently have an expiration date, therefore it is reasonable to consider scenarios for liner failure or that no liner exists. After a delisting has been granted, the Agency does not designate a specific landfill where the waste may be disposed. Therefore, the Agency has assumed a reasonable worst case scenario of no liner.

The DRAS assumes minimal cover which increases volatilization and particulate emission estimates which may not be reasonable.

Since disposal of a delisted material may occur in any unauthorized State, we must evaluate whether a State may or may not have regulatory requirements for daily cover. Regulations requiring daily cover on municipal landfills do not necessarily apply to industrial solid waste landfills. Furthermore, violations do occur. The worst case scenario must consider that the minimal requirements for daily cover exists.

General Motors and Delphi comments that the terms used in the DRAS should be more clearly defined. Does the term Cw for waste contamination account for the total mass of contamination in the waste or only that portion that may enter the aqueous phase and be transported into the unsaturated zone and/or the leachable portion?

All terms and equations used in the Delisting Risk Assessment Software (DRAS) program are discussed in the Delisting Technical Support Document (DTSD). All abbreviations, acronyms, and variables are listed in Chapter 1, pages x-xx of the DTSD. The DTSD is updated to reflect revisions and modifications to risk algorithms and methodology. The Agency encourages all users and reviewers to comment on the technical support documentation and continues to improve the clarity and transparency of the DTSD. The term Cw is not used in the document. Without specific information to the page location/screen location of the term referenced in the question above, no further response can be provided.

Does a Hazard Index of greater than 1 mean that the waste cannot be delisted?

A Hazard Index (HI) of 1 does not mean that the waste cannot be delisted, but that a more thorough evaluation of the waste will be necessary. In cases where the HI exceeds one for the entire waste, the Agency will then go on to evaluate the target organ for the critical effect of those chemicals contributing to the total HI. In some cases, the hazards associated with various chemicals in the waste result from effects to the same target organ, and are indeed additive. In other cases, the hazards of different chemicals impact different target organs, and are not additive, in which case the HI is lowered accordingly. The DRAS automatically assumes the conservative approach; summing all hazards to calculate the HI.

What criteria determine whether the allowable leachate concentration is set by SDWA MCL, DRAS calculation, treatment technology or toxicity characteristic level? Are some levels below background?

The allowable level is the most conservative of the DRAS calculations, a calculation based on the Safe Drinking Water Act Maximum Contaminant Level (MCL) or the toxicity characteristic level. Technology based treatment standards are not considered. The exception to this is the level for arsenic which is frequently calculated based on the concentration allowed by the MCL. Does EPA policy require that MCL or SW criteria be met? Does this policy apply at all downgradient distances or just those corresponding to the DAF?

Groundwater must meet MCL criteria but not surface water criteria. The DAF is used to calculate the concentration in the groundwater at a well a set distance downgradient. This distance was based on the results of a survey which identified the distance to the closest drinking water wells located near solid waste landfills throughout the country.

The pH of a landfill is generally higher than the pH of the extraction fluid used in the TCLP which affects the leachability of the metals.

The leachability of this waste was measured using three different extraction fluids representing a range of pH values. The pH values evaluated in this petition ranged from pH 4.93, 7.0, and 10.1. This is a fairly new piece of information requested by the Agency to evaluate whether the waste leachability will be significantly affected by changes in the pH environment.

The duration of leaching 18 min or 18 hr. may over or underestimate the leachability of some constituents. The Toxicity Characteristic Leaching Procedure (TCLP) does not account for variations in time to equilibrium for different species. The TCLP under predicts the maximum concentration of some anions and does not account for a variety of processes that can affect leachate quality, quantity and migration.

For regulatory purposes, the TCLP must be performed in 18 ± 2 hours. Eighteen hours is theoretically the residence time the aqueous phase remains in contact with the solid phase as it percolates through the waste in a landfill scenario. Assuming the data are being used for other purposes there is still no logical basis for decreasing the leaching time, since any lesser leaching time will generally under estimate the potential constituent concentrations.

The Agency should verify if the TCLP accounts for Dissolved Oxygen Content (DOC) in leachate which affects mobility of metals in the aquifer.

The TCLP does not account for site-specific conditions such as conductivity, pH, dissolved oxygen, and total dissolved solids. It is to be anticipated that no test methodology will be universally appropriate in all circumstances and will be varied based upon discrete site-specific conditions as was anticipated by the rule promulgating revisions to the TCLP. See, 55 FR 11798 (March 29, 1990) and

the Reynolds Metals Delisting Repeal 62 FR 41005 (July 31, 1997).

It may be appropriate for the Agency to consider data from the SPLP.

The Agency would consider any additional data that the petitioner chooses to submit. At this time the Agency requires leach testing for stabilized waste at 3 different pHs. The Agency also evaluates data from the Multiple Extraction Procedure (MEP). During the development of the Sampling and Analysis Plan for this delisting petition, the Agency and petitioner discussed which analytical methods were to be used and the approach for adequate characterization of the waste. The TCLP and testing at 3 different pHs were deemed appropriate analyses for characterizing this waste.

Several assumptions used in the DRAS model are unlikely and unreasonable: (1) A receptor lives and works at a single location 100 m downgradient and is exposed 350 days/yr; (2) Individuals are exposed to the 90th percentile level for all paths; (3) All media flow toward the receptor; (4) The landfill volume and conditions from 1987 is still valid; (5) The waste is placed uniformly at great depth over the whole landfill; (6) Only the most sensitive pathway for each constituent is selected which is an unlikely scenario; (7) First order decay applies although processes of oxidation, hydrolysis and biodegredation are not considered separately; (8) Transformation rate may not be reasonable for biological processes; (9) Fate and leaching estimates should include Kow, pKa, Henry's Law and potential for biological transformation; (10) All streams are fishable and representative; and (11) Nickel has a fish BCF of 307 which is unsupported by peer review publications and EPA's own documents. The DRAS model is intended to model a reasonable worst case model and is based on national averages of these factors. This is the same assumption used for the EPACML.

The DRAS employs risk assessment default parameters that are accepted throughout the Agency in risk analyses (i.e., residential exposure @ 350 days/yr, selection of the 90th percentile). These default standards are described and listed in Appendix A of the DTSD.

The DRAS does employ a conservative approach to exposure assessment by assuming the receptor may be exposed to both the most sensitive groundwater pathway and the most sensitive surface exposure pathway. To maximize the impact of the waste, the model assumes uniform placement of the waste and selects the most sensitive pathway for each constituent. The Agency has no way of knowing that this situation will not occur and therefore deems it prudent to protect for this condition by adding risks. Again, the Agency has no way of knowing the direction of media flow and must assume that all media flow may move toward the receptor. The Agency has no data to indicate that the landfill volume data and other data from the 1987 landfill survey report is not valid. When updated data are available, they will be incorporated into the analyses.

The groundwater fate and transport model used by the Agency to determine first order decay and other processes is the EPA's Composite Model for Leachate Migration with Transformation Products (EPACMTP). This model has been peer reviewed and received an excellent review from the Science Advisory Board (SAB). EPA has proposed use of this SAB-reviewed model and no convincing comments to the contrary have been received. The bioconcentration factor (BCF) for nickel has been revised from 307 to 78. The revised nickel BCF will be incorporated into the upcoming DRAS version 2.0.

GM and Delphi both comment that the model does not account for the uncertainty or sensitivity estimate on this exposure. Without a sensitivity analysis it is impossible to determine if a single pathway drives the risk. If data for most sensitive parameter is uncertain or limited, confidence in the result will be poor.

The DRAS provides the forward-calculated risk level and back-calculated allowable waste concentration for each exposure pathway, thereby permitting the user to determine which pathway drives the risk for a given chemical. These analyses are currently provided for the user by the DRAS program on the Chemical-Specific Results screen.

What is the effect of assuming a DAF of 18?

The Dilution Attenuation Factor (DAF) of 18 is a conservative DAF determined by the EPACMTP fate and transport model for the landfill waste management scenario. The DAF of 18 represents the class of organic chemicals for non-degrading, non-sorbing, characteristics. When creating a chemical to add to the DRAS chemical library for use in DRAS analyses, we recommend using a conservative value.

What is the sensitivity of using the 50th percentile on release and risk estimates?

The DRAS assessment uses high end estimates from the 90th percentile to select the best available data for each parameter. As mentioned in 65 FR 58019 (September 27, 2000), some EPA risk assessments may select the 50th percentile of the best available to represent typical values. The DRAS assessment always defaults to high-end values.

The BCF of 307 for nickel in fish is unsupported in EPA's own documents. Nickel does not bioaccumulate due to incomplete adsorption and rapid excretion. Literature values are much less. BCF should not be used for predicting chronic toxicity. Some organs can regulate internal concentrations. Ni^{+2}, not the parent, is persistent and bioavailable.

The Bioconcentration Factor (BCF) for nickel has been revised to 78 and will be incorporated into DRAS version 2.0. This value is based on the geometric mean of 3 laboratory values (100, 100, 47). Further background on the studies used to derive these BCFs is available in the document entitled ''Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities'' (EPA530–D–99–001). However, neither BCF value (307 or 78) will have an impact on the delisting levels for nickel as the delisting level is driven by the groundwater ingestion pathway. In the DRAS risk analyses, nickel does not constitute an appreciable risk via surface pathways including fish ingestion in which the BCF is used to calculate risk.

How does the model distinguish metals that are important for some animals?

Delisting levels for metals far exceed any micronutrient levels. These micronutrient levels are accounted for in the delisting levels but the excess of the delisting level is not significant enough to pose a risk to the animals.

Current science suggests that the skin and respiratory tract are targets for soluble nickel salts yet the model literature states that the target organs and critical effects are decreased organ and or body weights.

The oral Reference Dose (RfD) is based on the assumption that thresholds exist for certain toxic effects such as cellular necrosis. It is expressed in units of mg/kg-day. Ambrose, et al. in ''Long-term Toxicologic Assessment of Nickel in Rats and Dogs'' [1] reported the results of a 2-year feeding study using rats given 0, 100, 1000 or 2500 ppm nickel (estimated as 0, 5, 50 and 125 mg Ni/

[1] Ambrose, A.M., P.S. Larson, J.R. Borzelleca and G.R. Hennigar, Jr. 1976. Long-term toxicologic Assessment of Nickel in Rats and Dogs. J. Food Sci. Technol. 13: 181–187.

kg bw) in the diet. Clinical signs of toxicity, such as lethargy, ataxia, irregular breathing, cool body temperature, salivation and discolored extremities, were seen primarily in the 100 mg/kg/day group; these signs were less severe in the 35 mg/kg/day group. Based on the results obtained in this study, the 5 mg/kg/day nickel dose was a ''no observed adverse effect levels'' (NOAEL), whereas 35 mg/kg/day was a ''lowest observed adverse effects levels'' (LOAEL) for decreased body and organ weights. For further information, please refer to the Agency's IRIS database.

In aquatic environs, much of the nickel present as ionic or stable organic complexes. Hence much of the nickel is insoluble with minimal bioavailability. Also, soil which contains high organic matter will limit nickel's mobility. Are maximum permissible levels set below background? Background levels for nickel are approximately 3.3 ppb freshwater; 2.1 ppb groundwater; 4 to 30 mg/kg soil.

The Agency agrees that some nickel may be insoluble, have minimal bioavailability, and have mobility dependent on organic content. However as explained above, in delisting analyses, site specific characteristics (beyond waste constituent concentration and volume) are not incorporated into analyses. Default values are given for many parameters used in risk analyses including the organic content of fishable waters. The Agency has no way of knowing what streams may be impacted and, therefore, establishes a conservative estimate of pertinent variables.

The DRAS is complex and EPA must explain the models and risk processes used in establishing regulatory limits.

Attached to the Delisting Risk Assessment Software is a Technical Support Document which explains the risk algorithms and documentation of the decisions made in development of the model. Publication costs prohibit the inclusion of all this information into the **Federal Register** notice but it is readily available in both the Technical Support Document and at the Region 6 Delisting page (*www.epa.gov/earth1/r6/pd-o/pd-o.htm*). However, the Agency believes that the Delisting Risk Assessment Software is no more complex than use of the EPACML for delisting, just because the calculations have been computerized make them no more difficult to understand than the EPACML. Similar regression models were developed for the DRAS. The risk pathways for surface water and air volatilization are evaluated by the same equations used previously in the delisting program. And finally, the pathways for showering and dermal contact are equations which are commonly used in risk assessments performed for cleanups and site assessments under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund and other programs.

EPA should confirm stoichiometry, speciation charge, formula weight, equilibrium and enthalpy estimates with regard to metal and organic ligands as risks from metal ion concentrations may be overestimated.

The Agency continues to review chemical-specific parameter data. Where appropriate, these data will be incorporated into the DRAS analyses. Currently, MINTEQA2 is used in the EPACMTP. As refinements to metals speciation with regards to groundwater fate and transport become available, they will be incorporated into the EPACMTP model. However, as explained above, in delisting analyses, site specific characteristics (beyond waste constituent concentration and volume) are not incorporated into analyses. Default values are given for many parameters used in risk. The Agency has no way of knowing how release mechanisms and exposure scenarios may be impacted given the final disposal location remains undefined.

The model may estimate fate and transport concentration that exceed water solubility.

It is assumed that this comment refers to the groundwater fate and transport model used by DRAS (i.e., the EPACMTP). Indeed, if waste concentration exceeds soil saturation, free form conditions may occur and the assumptions of the EPACMTP may be compromised. Therefore, soil saturation values have been incorporated into DRAS and the program will notify the user if a waste concentrations exceed soil saturation concentrations. Ambient water concentrations may be influenced by more than chemical solubility (e.g., organic content). Total concentrations that exceed 1% are also highlighted and flagged within the DRAS so that further evaluation can be performed.

The use of the NOAEL in Rfd calculations has been challenged by the Science Advisory Board (SAB). The dose response relationship and the consistency in response level are not identified. Regulatory limits are based more on experimental exposure than on biological relevance.

The EPA still uses the no observed adverse effect levels (NOAEL) in the development of a reference dose (RfD). Until such time that the Agency redefines RfD methodology, delisting will continue to determine hazards based on RfDs recommended by EPA's IRIS (Integrated Risk Information System) database. The Agency continues to support the use of RfDs in delisting determinations in such a manner consistent with EPA risk assessment methodology. The EPA risk assessors and EPA's Office of Research and Development scientists who have peer reviewed the DRAS have not questioned the method in which RfDs are employed in the DRAS analyses.

GM and Delphi both comment that model should be peer reviewed and the public should have the formal opportunity to provide comments.

The model has been peer reviewed by EPA risk assessors and EPA's Office of Research and Development scientists. The public has the opportunity to comment on the DRAS model each time a delisting is proposed which is based on the DRAS model. The Agency is currently using the same level of public review used by the delisting program in the use of new models. The same notice procedures were provided for the use of the EPA Composite Model for Landfills in 1991. The model's use as modified for the delisting program was promulgated in conjunction with its use in the Reynolds Metals Delisting petition See, 56 FR 32993 (July 18, 1991).

GM summarizes its comments on the DRAS by stating that (1) EPA is proposing significant changes to the methodology it uses to evaluate delisting petitions. It appears the changes would apply to all future delisting petitions. (2) The proposed changes are complex. Not enough information has been provided about the various assumptions, methodologies, and interactions between variables used by EPA in its model. (3) It appears that the proposed changes would apply in all EPA Regions, (4) The proposed changes may include elements of the still-draft, unpromulgated, and controversial HWIR waste model. It is inappropriate and contrary to law and the Administrative Procedures Act to use a model prior to

public notice and comment. (5) No **Federal Register** notice has been given to clearly indicate the EPA plans to change the way it reviews and evaluates delisting petitions. Instead, references to the changes in the model have been made as part of proposals to delist specific waste streams. (6) The model should be peer reviewed and if EPA is changing the model it uses to evaluate delisting petitions (from the EPACML to the DRAS model) USEPA should provide specific and clear public notification of this intent. The risk assessment methodology for delisting that has been used since 1991 should still apply until public review period is completed.

The EPA is following the same notice provided for changing from the VHS model to the EPA Composite Model for Landfills (EPACML). See 56 FR 32993, July 18, 1991. The public has the opportunity to comment on the DRAS model each time a delisting is proposed which is based on the DRAS model. General Motors has not stated any reason why the DRAS model is not appropriate for use in evaluating the risk associated with the Tenneco Delisting.

General Motors states that use of model with public review and comment is a violation of the Administrative Procedures Act and law. Opportunity for public review and comment is provided for each delisting petition. Comments are requested for each delisting decision regarding the decision to delist the waste and use of a model to assess the risk posed to human health and the environment. Each time the model is used, just as with the use of the EPACML, the public and interested stakeholders can comment on the appropriateness of the use. In fact, each proposed rule for approving a delisting proposes the use of a model in the evaluation of risk and asks for comment. Examples can be seen in the **Federal Register** for the EPACML as well as the DRAS. See, 56 FR 32993, (July 18, 1991), 64 FR 44867 (August 18, 1999), and 65 FR 75641, (December 4, 2000). Any petitioner or interested party may suggest more appropriate evaluation tools for predicting risk. Thus, EPA believes that adequate public notice has been provided and the APA has not been violated.

V. Regulatory Impact

Under Executive Order 12866, EPA must conduct an ''assessment of the potential costs and benefits'' for all ''significant'' regulatory actions. The final to grant an exclusion is not significant, since its effect, if promulgated, would be to reduce the overall costs and economic impact of EPA's hazardous waste management regulations. This reduction would be achieved by excluding waste generated at a specific facility from EPA's lists of hazardous wastes, thereby enabling this facility to manage its waste as nonhazardous. There is no additional impact therefore, due to this final rule. Therefore, this proposal would not be a significant regulation and no cost/benefit assessment is required. The Office of Management and Budget (OMB) has also exempted this rule from the requirement for OMB review under section (6) of Executive Order 12866.

VI. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601–612, whenever an agency is required to publish a general notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis which 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 any impact on a small entities.

This rule if promulgated, will not have an adverse economic impact on small entities since its effect would be to reduce the overall costs of EPA's hazardous waste regulations. Accordingly, I hereby certify that this 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.

VII. Paperwork Reduction Act

Information collection and record-keeping requirements associated with this final 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.

VIII. 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 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. The EPA finds that this final delisting decision is deregulatory in nature and does not impose any enforceable duty upon State, local, or tribal governments or the private sector. In addition, the final delisting does not establish any regulatory requirements for small governments and so does not require a small government agency plan under UMRA section 203.

IX. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. This rule is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will become effective on the date of publication in the **Federal Register**.

X. Executive Order 12875

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a state, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If

the mandate is unfunded, EPA must provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected state, local, and tribal governments, the nature of their concerns, copies of written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of state, local, and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.'' This rule does not create a mandate on state, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

XI. 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.

XII. 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. This rule 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 rule.

XIII. National Technology Transfer and Advancement Act

Under section 12(d) if the National Technology Transfer and Advancement Act, the Agency is directed 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, business practices, etc.) developed or adopted by voluntary consensus standard bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires that Agency to provide Congress, through the OMB, an explanation of the reasons for not using such standards.

This rule does not establish any new technical standards and thus, the Agency has no need to consider the use of voluntary consensus standards in developing this final rule.

Lists of Subjects in 40 CFR Part 261

Environmental protection, Hazardous Waste, Recycling, Reporting and recordkeeping requirements.

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

Dated: July 27, 2001.

Stephen Gilrein,

Acting Director of Multimedia Planning and Permitting Division.

For the reasons set out in the preamble, 40 CFR part 261 is 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, 2, and 3 of Appendix IX, part 261 add the following waste stream in alphabetical order by facility to read as follows:

Appendix IX—Wastes Excluded Under §§ 260.20 and 260.22

TABLE 1.—WASTE EXCLUDED FROM NON-SPECIFIC SOURCES

Facility	Address	Waste description
*	*	* * * * *
Eastman Chemical Company	Longview, Texas	Wastewater treatment sludge, (at a maximum generation of 82,100 cubic yards per calendar year) generated by Eastman (EPA Hazardous Waste Nos. F001, F002, F003, F005 generated at Eastman when disposed of in a Subtitle D landfill. Eastman must implement a testing program that meets the following conditions for the exclusion to be valid: (1) *Delisting Levels:* All concentrations for the following constituents must not exceed the following levels (mg/l). For the wastewater treatment sludge constituents must be measured in the waste leachate by the method specified in 40 CFR 261.24. Wastewater treatment sludge: (i) Inorganic Constituents: Antimony-0.0515; Barium-7.30; Cobalt-2.25; Chromium-5.0; Lead-5.0; Mercury-0.0015; Nickel-2.83; Selenium-0.22; Silver-0.384; Vanadium-2.11; Zinc-28.0

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

Facility	Address	Waste description
		(ii) Organic Constituents: Acenaphthene-1.25; Acetone—7.13; bis(2-ethylhexylphthalate—0.28; 2-butanone—42.8; Chloroform—0.0099; Fluorene—0.55; Methanol-35.7; Methylene Chloride—0.486; naphthalene-0.0321. (2) *Waste Holding and Handling:* If the concentrations of the sludge exceed the levels provided in Condition 1, then the sludge must be treated in the Fluidized Bed Incinerator (FBI) and meet the requirements of that September 25, 1996 delisting exclusion to be non-hazardous (as FBI ash). If the sludge meets the delisting levels provided in Condition 1, then it's non-hazardous (as sludge). If the waste water treatment sludge is not managed in the manner above, Eastman must manage it in accordance with applicable RCRA Subtitle C requirements. If the levels of constituents measured in the samples of the waste water treatment sludge do not exceed the levels set forth in Condition (1), then the waste is nonhazardous and may be managed and disposed of in accordance with all applicable solid waste regulations. During the verification period, Eastman must manage the waste in the FBI incinerator prior to disposal. (3) *Verification Testing Requirements:* Eastman must perform sample collection and analyses, including quality control procedures, according to SW–846 methodologies. After completion of the initial verification period, Eastman may replace the testing required in Condition (3)(A) with the testing required in Condition (3)(B). Eastman must continue to test as specified in Condition (3)(A) until and unless notified by EPA in writing that testing in Condition (3)(A) may be replaced by Condition (3)(B). (A) *Initial Verification Testing:* At quarterly intervals for one year after the final exclusion is granted, Eastman must collect and analyze composites of the wastewater treatment sludge for constituents listed in Condition (1). (B) *Subsequent Verification Testing:* Following termination of the quarterly testing, Eastman must continue to test a representative composite sample for all constituents listed in Condition (1) on an annual basis (no later than twelve months after the final exclusion). (4) *Changes in Operating Conditions.* If Eastman significantly changes the process which generate(s) the waste(s) and which may or could affect the composition or type of waste(s) generated as established under Condition (1) (by illustration, but not limitation, change in equipment or operating conditions of the treatment process or generation of volumes in excess 82,100 cubic yards of waste annually), Eastman must (A) notify the EPA in writing of the change and (B) may no longer handle or manage the waste generated from the new process as nonhazardous until Eastman has demonstrated through testing the waste meets the delisting levels set in Condition (1) and (C) Eastman has received written approval to begin managing the wastes as non-hazardous from EPA. (5) *Data Submittals.* Eastman must submit or maintain, as applicable, the information described below. If Eastman fails to submit the required data within the specified time or maintain the required records on-site for the specified time, EPA, at its discretion, will consider this sufficient basis to reopen the exclusion as described in Condition (6). Eastman must: (A) Submit the data obtained through Condition (3) to Mr. William Gallagher, Chief, Region 6 Delisting Program, EPA, 1445 Ross Avenue, Dallas, Texas 75202–2733, Mail Code, (6PD–O) within the time specified. (B) Compile records of operating conditions and analytical data from Condition (3), summarized, and maintained on-site for a minimum of five years. (C) Furnish these records and data when EPA or the State of Texas request them for inspection. (D) Send along with all data a signed copy of the following certification statement, to attest to the truth and accuracy of the data submitted: (i) Under civil and criminal penalty of law for the making or submission of false or fraudulent statements or representations (pursuant to the applicable provisions of the Federal Code, which include, but may not be limited to, 18 U.S.C. 1001 and 42 U.S.C. 6928), I certify that the information contained in or accompanying this document is true, accurate and complete.

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

Facility	Address	Waste description
		(ii) As to the (those) identified section(s) of this document for which I cannot personally verify its (their) truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete. (iii) If any of this information is determined by EPA in its sole discretion to be false, inaccurate or incomplete, and upon conveyance of this fact to the company, I recognize and agree that this exclusion of waste will be void as if it never had effect or to the extent directed by EPA and that the company will be liable for any actions taken in contravention of the company's RCRA and CERCLA obligations premised upon the company's reliance on the void exclusion. (6) *Reopener Language:* (A) If, anytime after disposal of the delisted waste, Eastman 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 for the delisting verification testing is at level higher than the delisting level allowed by the Regional Administrator or his delegate in granting the petition, then the facility must report the data, in writing, to the Regional Administrator or his delegate within 10 days of first possessing or being made aware of that data. (B) If the annual testing of the waste does not meet the delisting requirements in Condition (1), Eastman must report the data, in writing, to the Regional Administrator or his delegate within 10 days of first possessing or being made aware of that data. (C) If Eastman fails to submit the information described in Conditions (5),(6)(A) or (6)(B) or if any other information is received from any source, the Regional Administrator or his delegate will make a preliminary determination as to whether the reported information requires Agency 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 the Regional Administrator or his delegate determines that the reported information does require Agency action, the Regional Administrator or his delegate will notify the facility in writing of the actions the Regional Administrator or his delegate believes are necessary to protect human health and the environment. The notice shall include a statement of the proposed action and a statement providing the facility with an opportunity to present information as to why the proposed Agency action is not necessary. The facility shall have 10 days from the date of the Regional Administrator or his delegate's notice to present such information. (E) Following the receipt of information from the facility described in Condition (6)(D) or (if no information is presented under Condition (6)(D)) the initial receipt of information described in Conditions (5), (6)(A) or (6)(B), the Regional Administrator or his delegate will issue a final written determination describing the Agency actions that are necessary to protect human health or the environment. Any required action described in the Regional Administrator or his delegate's determination shall become effective immediately, unless the Regional Administrator or his delegate provides otherwise. (7) *Notification Requirements.* Eastman must do following before transporting the delisted waste off-site: Failure to provide this notification will result in a violation of the delisting petition and a possible revocation of the exclusion. (A) Provide a one-time written notification to any State Regulatory Agency to which or through which they will transport the delisted waste described above for disposal, 60 days before beginning such activities. (B) Update the one-time written notification if they ship the delisted waste into a different disposal facility.

TABLE 2.—WASTE EXCLUDED FROM SPECIFIC SOURCES

Facility	Address	Waste description
* * *	* * *	* * *
Eastman Chemical Company	Longview, Texas	Wastewater treatment sludge, (at a maximum generation of 82,100 cubic yards per calendar year) (EPA Hazardous Waste Nos. K009, K010) generated at Eastman. Eastman must implement the testing program described in Table 1. Waste Excluded From Non-Specific Sources for the petition to be valid.

TABLE 3.—WASTE EXCLUDED FROM COMMERCIAL CHEMICAL PRODUCTS, OFF SPECIFICATION SPECIES, CONTAINER RESIDUES, AND SOIL RESIDUES THEREOF

Facility	Address	Waste description
* * *	* * *	* * * *
Eastman Chemical Company	Longview, Texas	Wastewater treatment sludge, (at a maximum generation of 82,100 cubic yards per calendar year) generated by Eastman (EPA Hazardous Waste Nos. U001, U002, U028, U031, U069, U088, U112, U115, U117, U122, U140, U147, U154, U159, U161, U220, U226, U239, U359). Eastman must implement the testing program described in Table 1. Waste Excluded From Non-Specific Sources for the petition to be valid.
* * *	* * *	* * * *

[FR Doc. 01–20262 Filed 8–15–01; 8:45 am]
BILLING CODE 6560–50–P