

US EPA ARCHIVE DOCUMENT

Chapter V. Comments on the Suggestions by the Chemical Manufacturers Association (CMA) to Revise the Mixture and Derived-from Rules

The CMA codes identify all comments that address revisions to the MDF rules submitted by the Chemical Manufacturers Association (now the American Chemistry Council). Comments on the CMA suggested revisions to the MDF rules were broken down further into the following specific issue codes:

CMA1	General comments on CMA suggested revisions to the MDF rules
CMA2	General comments on the headworks exemption
CMA3	Monitoring of the actual concentration of spent solvents in wastewater
CMA4	Definition of headworks
CMA5	Allowing treated leachate from landfills (F039), derived solely from the disposal of spent solvents, eligible for the headworks exemption
CMA6	General comments on exempting treated leachate from landfills and land treatment units
CMA7	General comments on exempting aggressive biological treatment residues
CMA8	General comments on exempting hazardous waste combustion residues
CMA9	General comments on multisource listing for combustion residues
CMA10	Mixed waste incinerators have special concerns associated with sampling, testing, and handling mixed waste combustion residues
CMA11	General comments on expanding the de minimis exemption to F and K listed wastes
CMA12	Relationship of LDRs to CMA proposal

On the following pages, each CMA comment issue is summarized, and then followed by EPA's response. A list of all the specific comments (including the comment number assigned by the EPA docket, the page, and the paragraph) that are linked to each comment issue summary is also included. The full text of these comments appear in Appendix D.

Issue Code: CMA1: General Comments on the CMA Suggested Revisions to the MDF Rules

Comments: WH2P-00035, 1, 3; WH2P-00002, 1, 3; WH2P-00005, 1, 2;
 WH2P-00020, 1, 2; WH2P-00039, 6, 1; WH2P-00021, 10, 2;
 WH2P-00021, 12, 1; WH2P-00005, 5, 1; WH2P-00010, 4, 6;
 WH2P-00012, 2, 1; WH2P-00014, 3, 2; WH2P-00014, 4, 3;
 WH2P-00020, 3, 1; WH2P-00021, 9, 2; WH2P-00034, 2, 4;
 WH2P-00022, 3, 4; WH2P-00036, 2, 1; WH2P-00035, 22, 3;
 WH2P-00033, 3, 4; WH2P-00033, 17, 5; WH2P-00001, 3, 1;
 WH2P-00010, 11, 2; WH2P-00017, 2, 1; WH2P-00022, 6, 3;
 WH2P-00001, 3, 4; WH2P-00035, 22, 5; WH2P-00008, 2, 1;
 WH2P-00021, 2, 3; WH2P-00033, 1, 3; WH2P-00050, 2, 2;
 WH2P-00050, 3, 1; WH2P-00050, 9, 4; WH2P-00050, 10, 5;
 WH2P-00050, 11, 3; and WH2P-00050, 11, 5

Comment Summary:

The Agency received comments from 17 commenters in response to the Chemical Manufacturers Association's (CMA) suggested revisions to the MDF rules listed in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, five were received from industry, six were from industry associations, three were from utility companies or utility company associations, one was from a State Agency, one was from a Federal Government Agency, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

ASTSWMO did not support the suggested revisions to the MDF rules submitted by CMA. ETC stated that the five regulatory options submitted by CMA were not supported by an analysis of their potential health and environmental impacts. ETC believed that EPA should fully analyze these options and provide a full proposal for public comment before proceeding.

The rest of the commenters supported the type of regulatory options submitted by CMA and urged EPA to pursue those and other regulatory reforms. Several commenters believed the suggestions made by CMA would provide meaningful relief and significantly reduce over-regulation of low risk wastes. Several commenters also noted that the suggested revisions to the MDF rules represent a legally valid means for EPA to eliminate unnecessary regulation in a manner consistent with protecting human health and the environment. Also, the suggestions fulfill the requirements of the consent decree and the statutory mandate Congress originally imposed in 1992. The CMA suggestions present specific circumstances where the removal of the hazards which caused a waste to be listed are rewarded by no longer considering the waste to be hazardous unless it exhibits one of the hazardous characteristics of 40 CFR Part 261.3. While supporting the CMA options, Phillips Petroleum Company believed EPA should do much more by concentrating on the "source" identification of listed wastes rather than complicated schemes to provide "end of pipe" exit criteria.

Agency Response:

The Agency appreciates the comments received on the CMA (now American Chemistry Council, or ACC)suggested revisions to the MDF rules. The Agency plans to analyze each option independently to evaluate for merit and ease of implementation. The Agency plans to perform some risk screening as part of the evaluation.

Issue Code: CMA2: General Comments on the Headworks Exemption

Comments: WH2P-00022, 6, 3; WH2P-00035, 23, 2; WH2P-00005, 14, 3;
WH2P-00010, 12, 2; WH2P-00017, 2, 2; WH2P-00048, 5, 1;
WH2P-00041, 2, 2; WH2P-00033, 28, 2; WH2P-00030, 2, 1;
WH2P-00034, 3, 3; WH2P-00029, 2, 3; WH2P-00041, 2, 1;
and WH2P-00031, 2, 4

Comment Summary:

The Agency received comments from 13 commenters in response to the Chemical Manufacturers Association's (CMA) suggestion to expand the headworks exemption listed in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, two were received from industry, three were from industry associations, three two were from utility companies or utility company associations, three were from State Agencies, one was from a Federal Government Agency, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

Maine DEP noted that a CMA's suggested exclusion does not account for volatilization, an important factor considering the solvents involved, if the wastewater treatment system is not actually subject to Clean Air Act controls. In addition, they noted that CMA's suggested exclusion addresses whether and how RCRA should be modified in the wastewater treatment context, and that this is a matter that could be addressed comprehensively following the completion of the surface impoundment study. ETC stated it was not clear what the potential environmental impact would be of expanding this exemption to additional chemicals.

The rest of the commenters supported the CMA's recommendations for specific modifications to the mixture rule to expand the headworks exemption in 40 C.F.R. §§ 261.3(a)(2)(iv)(A) and (B). Commenters noted that subsequent to the original headworks exemption, additions were made to the F code solvent listings, but the corresponding changes were not made to the list of solvents in the headworks exemption. For consistency, benzene, 2-ethoxyethanol, 2-nitropropane and 1,1,2-trichloroethane should be added to the list of solvents allowed under the headworks exemption. Ohio EPA added that the circumstances and reasoning that EPA used to support finalizing the original exemption remain valid for these four solvents. Commenters also noted that they believed EPA would determine the appropriate headworks concentration (i.e., either 1.0 part per million or 25 parts per million). Also, it is appropriate, practical, and economical for a generator to manage small amounts of spent solvent wastes in a waste water treatment system subject to regulation under Sections 402 and 307 (b) of the Clean Water Act.

Agency Response:

EPA agrees that there is merit in proposing to expand the current exclusions in 40 CFR 261.3(a)(2)(iv)(A) and (B) (the "headworks" exclusion) to include the four solvents listed in

1986: benzene, 2-nitropropane, 2-ethoxyethanol, and 1,1,2-trichloroethane, and we are currently developing a proposal on such an expansion. In the proposal, EPA will take into account the issues raised by the commenters, including environmental impacts of the expanded exclusion, and the use of any available surface impoundment study data. In the meantime, we welcome any data or additional feedback from the public on this topic.

Issue Code: CMA3: Monitoring of Actual Concentrations of Spent Solvents in Wastewater

Comments: WH2P-00022, 6, 3; WH2P-00035, 23, 2; WH2P-00017, 2, 2;
WH2P-00005, 12, 4; WH2P-00014, 8, 2; WH2P-00046, 11, 2;
WH2P-00048, 5, 2; WH2P-00033, 25, 1; WH2P-00030, 2, 3;
WH2P-00046, 12, 4; WH2P-00033, 26, 1; WH2P-00029, 2,3
and WH2P-00033, 27, 2

Comment Summary:

The Agency received comments from eleven commenters in response to the Chemical Manufacturers Association's (CMA) suggestion discussed in the 1999 HWIR proposal to modify the mixture rule by allowing direct monitoring of spent solvents in wastewater. Of those comments, three were received from industry, two were from industry associations, one was from a utility company or utility company association, three were from State Agencies, one was from a waste management association and one was from a Federal Government Agency. A summary of the specific issues raised by commenters is provided below.

Nine of the commenters supported allowing direct monitoring of the actual concentration of spent solvents in untreated wastewater to demonstrate compliance. Several commenters believed direct monitoring would facilitate documentation of compliance. DoD noted that the suggested changes would provide accurate data at the point the wastewater enters the treatment system, but still would allow generators who rarely discharge solvents into their wastewater systems to use the current method for verifying compliance. Several commenters believed that the mass balance approach gives rise to a number of problems due to the varying degrees of precision in the underlying measurements and therefore, deters use of this exemption. Instead, direct sampling and analysis methods are much more straightforward to implement and would provide more accurate information about what actually is being discharged to treatment systems. Ohio EPA commented that direct monitoring provides the most definitive information as to the concentration levels of hazardous constituents in a waste. Direct monitoring would allow generators to apply the exemption to its full intended regulatory limit. General Electric Corporation recommended that compliance with the regulatory levels be measured on a rolling average basis since flows may be variable.

Several commenters noted that they do not believe that direct monitoring would encourage volatilization. They noted that EPA did not state directly that the current measurement scheme needed to account for volatilization when the headworks exemption was finalized and it is not part of the current regulatory language. However, it is recognized that over the years EPA has explained in preamble and later interpretive letters that it considered accounting for volatilization losses to be necessary to prevent facilities from volatilizing solvents in order to be eligible for the exemption. In the years subsequent to the statement, EPA has issued a number of regulations addressing air emissions of organics, including the listed solvents. Because EPA has addressed these potential air emissions by regulations which focus specifically on these emissions, there is no need for the headworks exemption to have to account for them as well. The air regulations issued by EPA that address the volatilization of solvents include the following: Subpart Kb of

the New Source Performance Standards, which establish emissions limits and engineering controls for storage of volatile organic liquids; The Hazardous Organic NESHAP Maximum Achievable Control Technology regulation ("HON MACT") which addresses control of emissions of organics, including organics in wastewater; RCRA Subparts AA, BB and CC which address emissions from a variety of hazardous waste transfer and storage equipment (pipes and containers), The forthcoming Subpart YYY of the New Source Performance Standards, which will regulate organic emissions from wastewaters. These air program regulatory processes are a better forum to regulate emissions from wastewaters, and EPA should not, in its RCRA program, try to regulate air emissions in a regulation designed to prevent wastewater and sludges from being included unnecessarily in the hazardous waste definition.

Two of the commenters, ETC and the State of Maine, remained concerned about the risks from volatilization, particularly for those wastewater units that are not currently subject to Clean Air Act requirements.

Agency Response:

In proposing an expansion of the headworks solvents exemption, EPA will also evaluate the issue of measurement versus mass balance calculation as a part of the implementation of the headworks rule. EPA agrees that in the past 20 years, significant new Clean Air Act regulations have come into effect that may address some of the concerns about deliberate volatilization. In developing a proposed revision to the monitoring requirements for the headworks rule, we would take into account the issue raised by the commenters, including the concerns about volatilization. We welcome any additional data the public has to support such a change.

Issue Code: CMA4: Definition of Headworks

Comments: WH2P-00007, 4, 2

Comment Summary:

The Agency received one comment from DOE in response to the Chemical Manufacturers Association's (CMA) suggestion to modify the mixture rule listed in the 1999 HWIR proposal. A summary of the specific issues raised by the commenter is provided below.

DOE recommended that if EPA decides to adopt CMA's suggested modifications to the headworks exemption or modify this particular regulatory provision, EPA should incorporate a clear definition of headworks for the purpose of claiming the exemption. The commenter offered the following headworks definition: the calculated average of all influents flowing into the first aggregation point (treatment unit) of the treatment system.

Agency Response:

The Agency does not believe that the RCRA program should devise such a definition. Too many differences exist between wastewater treatment systems, and trying to define "headworks" may actually cause more confusion. In addition, most wastewater treatment systems are designed pursuant to Clean Water Act requirements. Therefore, defining headworks is beyond the scope of the RCRA program. However, if CWA programs did formulate a definition for headworks, the RCRA program would probably refer to the same definition to promote internal Agency consistency.

Issue Code: CMA5: Allowing Treated Leachate from Landfills, Derived Solely from the Disposal of Spent Solvents, Eligible for the Headworks Exemption

Comments: WH2P-00022, 6, 3; WH2P-00017, 2, 2; WH2P-00048, 5, 4; WH2P-00005, 14, 2; WH2P-00014, 9, 1; WH2P-00046, 13, 4; and WH2P-00033, 27, 4

Comment Summary:

The Agency received comments from seven commenters in response to the Chemical Manufacturers Association's (CMA) suggestion to exempt treated leachate from landfills, derived solely from the disposal of spent solvents, as presented in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, three were received from industries, one was from an industry association, one was from a utility company or utility company association, one was from a State Agency, and one was from a Federal Government Agency. A summary of the specific issues raised by commenters is provided below.

NY State Department of Environmental Conservation did not support the inclusion of multi-source leachate (F039) in the headworks exemption, even though the leachate might be derived from the disposal of solvent wastes. They noted that leachate might contain any variety of hazardous constituents, due to the presence of characteristic wastes or non-hazardous wastes. They further noted that it would be difficult to determine whether the headworks exemption, if modified in this manner, would protect human health and the environment sufficiently. They did state that if the discharge is regulated under the Clean Water Act (CWA), this may provide a reasonable amount of assurance with respect to exposure paths, relating to the wastewater discharge.

The rest of the commenters supported extending the exemption to multi-source leachate (F039) derived solely from the disposal of the spent solvents in 40 C.F.R. §261.31. DoD noted that in many cases, leachate is contaminated with barely detectable concentrations of F-listed solvents, yet the leachate still is classified as hazardous waste under the MDF rules. By allowing the wastewater to be discharged for treatment to a wastewater treatment or pre-treatment system regulated under the CWA, EPA would encourage remediation by lowering treatment costs. DoD also stated that EPA must believe that the 1 ppm/25 ppm concentration limits established under the existing rules are protective of human health and the environment, so extending those limits to wastes derived from the land disposal of certain listed solvent should be adequately protective also.

Several commenters noted that the advent of multi-source leachate waste code simplified some hazardous waste management by applying the single listing code to hazardous waste leachate. However, this streamlining did create some unintended consequences. Leachate generated solely from F001-F005 no longer qualified for the headworks exemption, even though the composition of the leachate was virtually identical to dilute non-leachate F001-F005 streams. Therefore, even though F039 derived solely from F001-F005 wastes are exactly the same in chemical composition as the wastes from which they are derived, they cannot be treated in the same

treatment train. They must be segregated and handled in separate tank-based systems or shipped off site for treatment and disposal causing additional cost but providing no additional environmental protection. General Electric Corporation recommended that EPA issue a technical correction or clarification notice with or before promulgating the final HWIR rule to address this problem. Under CMA's suggested option, the headworks exemption rationale for the solvent wastes from ongoing production processes would be applied equally to solvent wastes leaching from a landfill. Both are treated equally well in the wastewater treatment plant at these low concentrations, so there is no justification for regulating them differently.

Agency Response:

EPA is also interested in possible applications in which solvent-only landfill leachate may be sent to a wastewater treatment facility. We are concerned, however, about possible difficulties in determining whether a landfill has received only solvent wastes. As part of the investigation, EPA would need more information characterizing possible "solvent waste only" landfills. We welcome any additional data the public has on these landfills.

Issue Code: CMA6: General Comments on Exempting Treated Leachate from Landfills and Land Treatment Units

Comments: WH2P-00030, 4, 3; WH2P-00034, 3, 2; WH2P-00029, 2, 1; WH2P-00005, 11, 2; WH2P-00014, 7, 2; WH2P-00046, 16, 3; WH2P-00033, 33, 1; and WH2P-00009, 2, 3

Comment Summary:

The Agency received comments from eight commenters in response to the Chemical Manufacturers Association's (CMA) suggestion to exempt treated leachate from landfills and land treatment units, as listed in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, three were received from industries, one was from an industry association, three were from State Agencies, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

ETC did not support the exemption, noting that tanks for treatment of leachate that are part of a Clean Water Act (CWA) system already are conditionally exempt. Thus, it is not clear to ETC why a more expansive exemption was advisable, particularly because leachate from hazardous wastes may often contain toxic constituents that are not subject to NPDES discharge limits or water quality standards. Also, Maine DEP did not support the exemption noting that many organics of concern are not covered by the toxicity characteristic. Furthermore, the surface impoundment assessment which EPA is conducting is designed to determine where the line should be drawn between the water program and the RCRA program. Therefore, it would be inappropriate to exempt these waste streams independent of this study, particularly without any supporting data on the physical/chemical properties of the leachate and its associated risks. Finally, there is no generic way to tell if these leachates will pose a problem. They could be very different from unit to unit depending upon what type of waste has been placed in the unit. There also could be an air emission problem or the leachate could cause the sludge to become hazardous. Instead, industries should go through a site specific delisting for these units.

California Department of Toxic Substances Control did not understand CMA's recommendation to exempt from the derived-from rule, leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the CWA). Currently, this F039 waste is subject to Part 268 land disposal restriction requirements and could be treated onsite in a tank or container within 90 days of generation without a permit. If this treated waste was an industrial wastewater discharge that was a point source discharge subject to regulation under section 402 of the Clean Water Act, it would be eligible for the 261.4(a)(2) exclusion. In that case the wastewater would not be a solid waste. They wondered if CMA was suggesting that F039 be exempt from LDR requirements. If that was the case, they did not support such a recommendation.

Ohio EPA stated that there may be merit in exempting leachate from the land disposal of a listed hazardous waste that subsequently is managed in a wastewater treatment system regulated under CWA. However, to make a definitive decision, they would need to evaluate constituent

concentration data, current management practices, current environmental injury cases caused by the residues, and whether the residues commonly exhibit a hazardous waste characteristic. The leachate is generated from landfills where only treated hazardous wastes are disposed. Since bonafide treatment has occurred and the residues are physically and/or chemically different from the hazardous wastes they were generated from, the State believed it was appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibited a hazardous waste characteristic.

The rest of the commenters believed that EPA should consider leachate from hazardous waste landfills to be a newly generated waste. As a newly generated waste it would be subject to regulation if it failed one or more hazardous waste characteristics, but would no longer be subject to hazardous waste regulation solely because the landfill accepted listed hazardous wastes. Several commenters noted that most POTWs would not accept direct discharges of listed hazardous waste, even if the leachate met all applicable effluent guidelines and other standards. As a result, several commenters noted that they must use costly and unnecessary incineration or other treatment at off-site facilities. In addition, the transportation and management from sending the wastes off-site actually may increase environmental risks and energy usage relative to the protective and cost-effective management in industrial wastewater systems. Several commenters noted that both landfills and land treatment units, as defined by RCRA, generate a leachate when constructed with a bottom liner. Leachate from either type of unit should qualify for the exemption so long as it did not fail for a hazardous characteristic and the wastewater treatment system receiving the leachate was permitted under the CWA. General Electric Corporation and Phillips Petroleum Corporation also recommended as an alternative to considering leachate from hazardous waste landfills to be a newly generated waste, that EPA make it eligible for the headworks exemption.

CMA argued that EPA erroneously assumes that all leachate can be discharged to POTWs or directly discharged to surface waters. Based on industry experience, CMA seriously questioned EPA's assumption. For example, in an integrated chemical plant and refinery, the waste going to the onsite landfill may contain both F037 (refinery oil/water/solids separation sludge) and K048 (DAF float). Both of these listed wastes are removed from the wastewater treatment system and the wastewater phase that is sent to the wastewater treatment system is not a listed waste; thus the wastewater treatment plant is not regulated under Subtitle C. However, the leachate from the landfill would be classified as F039 (because it contains two listed wastes) and could not be sent back to the wastewater treatment system since the mixture rule requires its management in a Subtitle C regulated unit.

CMA also argued that Congress has taken the position that regulation under the CWA should not be duplicated and in some cases not be pre-empted by RCRA. RCRA's mandate to integrate and avoid duplicative environmental regulation, the domestic sewage exclusion, and the Land Disposal Program Flexibility Act were given as examples. CMA stated that EPA has supported this expectation as demonstrated by the exemption provided under RCRA for treatment of

hazardous waste in wastewater treatment units regulated under the CWA. Also, since the Office of Water's efforts to develop effluent guidelines for landfills is still in process, and it is unknown whether the final version will alleviate the problem described, several commenters urged EPA to adopt a RCRA solution, such as proposed by CMA.

Agency Response:

At this time, EPA is still considering the suggested regulatory exclusion for leachate derived-from landfilled hazardous waste as well as other specific exemption options, but we first need to evaluate several important issues. As noted in the comments, most hazardous waste leachate is regulated under a separate waste code, F039. To date, we have received no information that would cause us to reconsider that listing, although we would welcome any data that might be helpful in such a re-evaluation. However, in the most recent EPA study of landfill leachate characteristics (65 FR 3007, January 19, 2000), we found considerable differences between the leachate samples from hazardous and those from non-hazardous landfills in both numbers of constituents of concern and their concentrations. Hazardous waste landfill leachate contained a greater number of constituents than non-hazardous waste landfill leachate, and constituents found in both hazardous and non-hazardous waste landfill leachate were generally present in hazardous waste landfill leachate at concentrations an order of magnitude higher than those found in non-hazardous waste landfill leachate.¹ As noted in the comments, these pollutants can include many organic hazardous constituents not covered by the Toxicity Characteristic. Absent a risk assessment, it is not possible to determine whether the levels of these constituents pose unacceptable risk. However, the presence of these constituents is a strong indication that more study would be needed before developing an exemption for hazardous waste leachate.

¹Development Document for Final Effluent Limitations Guidelines and Standards for the Landfills Point Source Category, EPA-821-R-99-019, U.S. EPA, January 2000.

Issue Code: CMA7: General Comments on Exempting Aggressive Biological Treatment Residues

Comments: WH2P-00030, 4, 3; WH2P-00034, 3, 2; WH2P-00031, 2, 4; WH2P-00005, 5, 2; WH2P-00014, 5, 1; WH2P-00046, 9, 2; WH2P-00033, 20, 2; WH2P-00029, 2, 2; WH2P-00009, 1, 3; WH2P-00050, 2, 2; WH2P-00050, 3, 1; WH2P-00050, 4, 2; WH2P-00050, 10, 1; WH2P-00050, 10, 6; and WH2P-00050, 11, 4

Comment Summary:

The Agency received comments from 10 commenters in response to the Chemical Manufacturers Association's (CMA) recommendation to exempt aggressive biological treatment residues, as presented in the 1999 HWIR proposal, from the derived-from (MDF) rules. Of those comments, four were received from industries, two were from industry associations, three were from State Agencies, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

ETC did not support excluding sludges from the biological treatment of listed hazardous wastes. They noted that the sludges typically contain concentrations of heavy metals that warrant further treatment and Subtitle C disposal. EPA's listing background document for F006 electroplating sludges, for example, provides data on the presence of lead, cadmium, chromium and other toxic metals in such wastewater treatment sludges.

Maine DEP and California Department of Toxic Substances Control did not support the exemption noting that these sludges can continue to pose a threat to human health and the environment and should continue to be subject to the derived-from rule. The States also believed that these wastes should meet land disposal restriction (LDR) treatment standards, just as any other listed hazardous waste is required to meet a treatment standard before being disposed in a permitted Subtitle C facility. Maine DEP also noted that EPA proposed retention of the mixture and derived from rules in part because of the potential toxicity of wastewater treatment sludges. (See 64 FR 63389).

Ohio EPA noted that there may be merit in exempting aggressive biological treatment residues. However, to make a definitive decision, they would need to evaluate constituent concentration data, current management practices, current environmental injury cases caused by the residues, and whether the residues commonly exhibit a hazardous waste characteristic. Since wastewater treatment is a bonafide treatment method proven to detoxify or otherwise treat hazardous waste and the residues are physically and/or chemically different from the hazardous wastes they were generated from, they believed it was appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibited a hazardous waste characteristic.

The rest of the commenters supported excluding sludges from the biological treatment of listed hazardous wastes. Many commenters noted that industrial biosludges currently are overmanaged as hazardous wastes at a high cost to industry. Several commenters added that residues from

biological treatment processes have reduced organic constituent concentrations significantly relative to the original waste. Commenters noted that most listed wastewaters are 99% water and are therefore substantially different in terms of potential for environmental harm than a non-wastewater form of the same waste. Also, residues derived from aggressive biological treatment are fundamentally different (both chemically and physically) from the originally listed wastes and these residues should be considered a new point of generation. General Electric Corporation submitted data on the concentration of chemicals in a combined treatment sludge.

Additionally, commenters claimed that in recent hazardous waste listings EPA has recognized that treatment sludges do not necessarily present any significant environmental hazard even when there is sufficient hazard in the waste as generated to warrant listing by EPA (e.g., wastewater treatment sludges from carbamates, anthraquinone, and chlorinated aliphatics). Commenters also noted that public reporting of these very large volumes of derived-from waste misleads the public over the amount of actual hazardous waste in their communities.

Several commenters asserted that regulating treated wastewater under RCRA provides an incentive to discharge directly to the stream even in situations when to do so is not the best environmental choice. Because the derived-from rule applies to treated wastewaters up to the point of discharge, ridiculous situations can arise in which hazardous waste requirements are applied to wastewaters that have already been treated to meet the facility's discharge limits, i.e., are ready to be discharged to public waterways. For example, if the stream to which wastewater is to be discharged is swollen from heavy rains and flooding (or threatening to flood), it may be desirable to avoid discharging treated wastewaters to the stream until the water level declines. In such instance, temporarily holding treated wastewater in land-based surface impoundments may minimize the impact of discharge on downstream flooding. Similarly, during periods of low stream flow (e.g., the summer months), the facility may need to hold treated wastewater in a series of equalization ponds or impoundments until the stream flow is sufficient to accept the discharge. In addition, some treated wastewaters are run through a post-aeration basin to add oxygen to the waters prior to discharge. Such basins must be regulated under RCRA Subtitle C even though it is holding wastewater that meets its permit limits for chemical composition.

CMA also noted that if a leak or spill occurs prior to the NPDES outfall, it must be managed as a hazardous waste spill. Not only is it ridiculous to expend the resources required to clean up a spill of water that already meets the facility's discharge limits, but, since the CERCLA reportable quantity for many hazardous constituents is still one pound, the facility will have to report the spill to the National Response Center. This not only wastes the facility's resources, but the resources of the NRC.

Several commenters believed that there should not be a specific contingent management requirement associated with the exempted biosludge. Rather, the sludge would be subject to state industrial non-hazardous waste RCRA (Subtitle D) programs, including restrictions on industrial non-hazardous landfilling, combustion and other management options. Since

industrial biosludge resulting from an aggressive biological treatment system is not significantly different than sewage sludge, the commenters expected that any restrictions placed on use of sewage sludge would apply to exempted sludge likewise.

A few commenters pointed out that this new point of generation approach has been part of the LDR program for characteristic wastes for many years. The commenters noted that in the LDR program, EPA recognized that various treatment residuals differ from the wastes from which they are derived and should not continue to be regulated as the same wastes. In at least three other situations, EPA has made a specific determination that the generation of wastewater treatment biosludge constitutes a new point of generation, generally on the basis that the wastewater being treated falls into one treatability group and the resultant sludge into another. They are: 1) sludge from the treatment of U154 contaminated groundwater -- The sludge is considered newly generated waste because it is a different treatability group than the wastewater being treated -- sludge generated from treating non-ignitable wastewaters not derived from hazardous waste (03/21/96 Berlow, EPA to Day, Bryan Cave, LLP); 2) LDR notification requirements for wastewaters and sludges - LDR requirements apply only to wastes that are hazardous at the point of generation. Non-hazardous sludges removed from a wastewater treatment unit require no LDR notification. The requirement to identify and treat for underlying hazardous constituents (UHCs) is not applicable to wastewaters managed in centralized wastewater treatment systems subject to the CWA or to sludges that are not hazardous at the point of generation (05/01/97 Cotsworth, EPA to Dolce, Award Environmental Inc.); and 3) applicability of land disposal restrictions to tank-based wastewater treatment systems -- LDRs do not apply to waste managed in systems that are entirely tank-based; sludge generated from wastewater treatment belongs to a different treatability group, and is therefore a newly generated waste that should be evaluated at the point of generation (03/29/97 Berlow, EPA to Day, Bryan Cave, LLP).

Agency Response:

EPA is considering a tailored exclusion for biological treatment residues, but does not believe that a blanket exclusion from the mixture and derived-from rules is appropriate for such wastes. Not all wastestreams are amenable to biological treatment, and the composition of the residuals generated from biological treatment would vary greatly depending on the influent and on the efficacy of the treatment system.

We have, in the past, determined that biological treatment systems are inappropriate for metals and could result in impermissible dilution under the LDR program.² We have also denied a delisting petition for K035 sludges resulting from aerated biological treatment of creosote in a

²EPA 1990. LDR Determination of Waste Stream Dilution. Letter from Jeffery Denit, Deputy Director, Office of Solid Waste to Bruce Smith, Director, Office of Hazardous Waste Programs, EPA Region III, October 14, 1990. [FAXBACK 13414, PPC 9551.1990(06)]

surface impoundment in part because of downgradient groundwater contamination.³ In addition, we have information that facilities have attempted to avoid generating F037 and F038 wastes by adding minimal aeration to primary treatment units and claiming the sludges from these units as excluded.⁴

However, EPA believes there may be merit to the idea of regulating certain types of biological treatment residues differently. As noted in the comments, we have in the past excluded certain types of biological treatment wastes from regulation (see, for example, 40 CFR 261.3(c)(2)(ii)(D)). There may be other types of waste similarly amenable to biological treatment. Before developing such a regulatory proposal, EPA would first gather and analyze data on biological treatment waste. Therefore, any such data would be welcomed by the Agency.

³EPA 1987. K035 Listing and Inclusion of Sludges from Biological Treatment of Creosote Production Wastes Letter from Bruce R. Weddle, U.S. EPA, to Jordan Dern, Koppers Company, Inc., December 11, 1987. [FAXBACK 13105, PPC 9444.1987(52)].

⁴U.S. EPA 1991. Draft Region VIII Policy on "Aggressive Biological Treatment" Letter from Robert L. Duprey, Director, Hazardous Waste Management Division (EPA Region VIII) to Sylvia K. Lowrance, Director, Office of Solid Waste, April 19, 1991 (Ref: 8HWM-RI)

Issue Code: CMA8: General Comments on Exempting Hazardous Waste Combustion Residues

Comments: WH2P-00029, 1, 2; WHWP-00201, 12, 2; WHWP-00197, Ltr.;
WH2P-00030, 4, 3; WH2P-00041, 2, 1; WH2P-00031, 2, 4;
WH2P-00009, 1, 3; WH2P-00046, 14, 1; WH2P-00033, 28, 3;
WH2P-00005, 7, 2; WH2P-00014, 6, 2; WH2P-00032, 1, 2;
WH2P-00048, 4, 2; WH2P-00034, 2, 4; WH2P-00015, 2, 4;
WH2P-00050, 3, 1; WH2P-00050, 9, 3; and WH2P-00050, 10, 6

Comment Summary:

The Agency received comments from 15 commenters in response to the Chemical Manufacturers Association's (CMA) recommendation to exclude hazardous waste combustion residues as discussed in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, seven were received from industries, two were from industry associations, four were from State Agencies, one was from a waste management company, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

ETC, Maine DEP and California Department of Toxic Substances Control did not support exempting combustion residues, noting that there is a great deal of variability in combustion residues. While some organic compounds are destroyed effectively by the combustion process, the residue may contain inorganic constituents that are equally or more toxic, e.g. dioxins and non-TC metals. Accordingly, while the combustion byproducts may be physically and chemically dissimilar from the listed waste it is derived from, the byproducts have toxic properties that could cause environmental degradation. The commenters believed that relying on the TC by itself fails to provide adequate protection of human health and the environment. First, not all metals of concern are covered by the TC. Second, the TC only measures potential risks via the groundwater pathway, and it is not definitive that the groundwater is the driving risk for these wastes. Third, the TC regulatory thresholds were not set at levels determined to be fully protective, but were instead set at levels that clearly were hazardous. Wastes that do not exhibit hazardous waste characteristics are not necessarily non-hazardous. In addition, the California Department of Toxic Substances Control believed it was prudent to wait for EPA's proposed combustion residues listing to address the physical and chemical properties of these wastes before any action is taken on CMA's proposal.

Ohio EPA and the NY Department of Environmental Conservation stated that there may be merit in exempting residues from the combustion of listed hazardous wastes. However, to make a definitive decision, Ohio EPA would need to evaluate constituent concentration data, current management practices, current environmental injury cases caused by the residues, and whether the residues commonly exhibit a hazardous waste characteristic. Since bonafide treatment has occurred and the residues are physically and/or chemically different from the hazardous wastes they were generated from, the State believed it was appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibited a hazardous waste

characteristic. The NY Department of Environmental Conservation believed an exemption for combustion residues could be appropriate if the combustion takes place in a permitted (not interim status) hazardous waste combustion device; any listed wastes are listed for organic hazardous constituents only; the residual must not exhibit any characteristics; and the residues meet LDRs, including for underlying constituents. This approach would protect human health and the environment fully and would allow many combustion residues to exit Subtitle C regulation once LDRs are met.

The rest of the commenters believed that EPA should consider residues from hazardous waste combustion to be a new point of generation. These combustion residuals differ dramatically in their physical and chemical makeup from the original listed hazardous wastes from which they are derived. Subtitle C regulation is not needed for such combustion residuals, especially if the residues do not exhibit hazardous characteristics. Instead, the residues can be managed adequately and protectively as industrial non-hazardous waste or discharged under the Clean Water Act. The high cost of regulating these materials as hazardous waste purchases little or no increased protection of human health and the environment. The hazardous waste combustion process destroys virtually all of the organics in the listed wastes from which these residuals are derived, and the Toxicity Characteristic limits for metals are virtually the same as the health-based limits EPA-established for excluding Bevill wastes from Subtitle C regulation. General Electric Corporation submitted information on the operating parameters and limits for their combustion and the concentrations of the sludge from incinerator scrubber water generated. The new-point-of-generation approach has been part of the LDR program for characteristic wastes for many years and EPA has recognized that various treatment residuals differ from the wastes from which they are derived and thus should not continue to be regulated as the same wastes.

Occidental Chemical Corporation noted that in combustion-related rulemakings, EPA consistently has maintained that well-operated and maintained combustion units can achieve high combustion efficiencies and can be operated in a manner that is protective of human health and the environment. Therefore, they recommended the exemption be limited to residues from units that continuously monitor stack emissions of CO, and do not exceed a CO level of 100 ppmv measured as an hourly rolling average.

While agreeing with CMA's proposal, the International Precious Metals Institute believed it should be extended to combustion residues from facilities operating pursuant to part 266, subpart F, specifically residues from precious metal reclamation operations. They noted that the recovery of precious metals from hazardous waste is not a TSDF operation, and the units are not permitted under the same CFR sections. They added that precious metal-bearing residues also are environmentally safe for two additional reasons: 261.3(c)(2)(ii) requires that such precious metal-bearing residues must not exhibit one or more of the characteristics of hazardous waste and the residues must contain economically significant amounts of precious metals (to partake of the authority of part 266.100(f),) and thus will be further reclaimed rather than disposed, ensuring

environmentally protective management.

CMA supported the use of the TCLP extract concentration limits in Appendix VII to 40 C.F.R. 266 as the criteria for considering such exempted solid residues from hazardous waste combustion units as hazardous or non-hazardous. Several commenters also believed that solids residues from hazardous waste combustion units that do not exhibit any toxicity characteristic should be considered industrial non-hazardous waste. As such, the materials would be subject to state industrial non-hazardous waste RCRA (Subtitle D) programs.

Agency Response:

EPA is considering a possible exclusion for certain combustion residues, but does not believe that a blanket exemption from the mixture and derived-from rules is appropriate for such wastes. Although hazardous waste combustors must meet at least 99.99% DRE (destruction and removal efficiency), metals and certain organics may only be transferred to a residue. EPA does not believe that stack emissions are a reliable measure of the risk posed by the combustion residue; in fact, as technology improves the removal capability of air pollution control devices, the resulting residue will likely have greater concentrations of hazardous constituents and may pose unacceptable risks if mismanaged. In addition, several of the mixture and derived-from waste damage cases that EPA has identified are a result of improper disposal of combustion residues.⁵

Also, as mentioned earlier in response to comment MDF2, EPA disagrees with comments stating the Toxicity Characteristic (TC) provides adequate regulatory coverage of these wastes. The TC sets regulatory levels for only 40 chemicals. (see 40 CFR 261.24). On the other hand, the hazardous waste listings are based on hundreds of different chemicals. (see Appendix VII to 40 CFR Part 261). In addition, the TC levels were set to ensure that wastes that contain chemicals exceeding those levels are clearly hazardous. However, wastes with chemicals below those levels can pose a risk to human health and the environment. (55 FR 11799). Thus, even when the chemical concentrations are below TC levels, combustion residues can pose risks to human health and the environment.

In addition, EPA is particularly concerned about the possible formation of dioxins and furans during hazardous waste combustion. In the September 1999 combustion rule, we noted that there is “a considerable body of evidence” to show that dioxin and furan compounds can be formed in the post-combustion regions of hazardous waste combustors (see 64 FR 52994). Because of this concern, we have added these dioxin and furan compounds to Appendix VIII of 40 CFR part 266, which lists products of incomplete combustion (PICs) likely to be found in stack effluents.

⁵see table 1, EPA 2000. Releases of Hazardous Constituents Associated with Mixture and Derived-from Wastes (An Update) U.S. EPA, April 2000.

However, EPA is considering a proposed tailored exclusion for certain combustion residues. For example, EPA is currently developing for public comment a proposed exclusion that focuses on wastes that have been slagged to liquefaction. These slagged wastes are unique because the high temperatures associated with liquefaction (2100°F, typically) appear to eliminate organic chemicals, including PICs, and generate a slagged residue which is a glassy, liquid, molten material that, when cooled, forms a potentially durable, homogeneous, solid mass. This combination of elimination of organic chemicals and change in physical form (which can reduce risk from non-groundwater pathways) make these slagged residues potential candidates for de-regulation. However, the liquefaction process does not reduce the concentration of toxic metals in the waste, which we would need to evaluate for potential risks to human health and the environment. EPA is planning to address this issue, as well as other possible tailored exclusions for combustion residues, in the upcoming proposal

Issue Code: CMA9: General Comments on the Multisource Listing for Combustion Residues
Comments: WH2P-00029, 1, 2; WH2P-00045, 2, 2; WH2P-00017, 5, 1;
WH2P-00036, 2, 3; WH2P-00011, 4, 3; WH2P-00034, 2, 4; and
WH2P-00015, 5, 3

Comment Summary:

The Agency received comments from seven commenters concerning a multisource listing for combustion residue, in response to the Chemical Manufacturers Association's recommendations in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, one was received from an industry, one was from a State Agency, one was from a Federal Government Agency, two were from waste management companies, and two were from a waste management association. A summary of the specific issues raised by commenters is provided below.

DoD, ETC and Maine DEP supported EPA's development of a multi-source listing code and tailored regulatory requirements, particularly testing and analytical requirements as a way to address combustion residues instead of CMA's proposal the residues from the derived-from rule. While supporting the development of a multisource listing, DoD recommended that an exclusion be provided for facilities that only burn characteristic wastes D001 or D003 or the 29 wastes that are listed solely for a characteristic of ignitability or reactivity. Since incineration is typically the technology most effective for these waste streams, the resultant residue should not be listed or regulated as a hazardous waste as it is no longer exhibits a characteristic.

Envirocare of Utah believed that the industry and public could benefit from EPA establishing a broad LDR standard for combustion residue (ash) similar to the LDR standard for multi-source leachate. They provided the following list of constituents that should be considered as reasonably expected to be present in the waste: dioxins, furans and metals. They also noted that there was an inconsistency among EPA and its regions regarding the regulatory status of residue (ash) from combustion. At least one EPA region views this waste as a newly generated waste where the waste that was incinerated is disposed in the combustion process. Also, at least one other EPA region views this waste as a treatment residue that is part of a treatment train of the original waste, not as a newly generated waste derived from the disposal of the original waste. They suggested that as part of this rulemaking, EPA should clarify the status of this waste as different standards are being applied, even within EPA.

Pioneer Americas and Onyx Environmental Services stated that combustion residues should not be burdened with yet more requirements to be handled as a listed hazardous waste and that application of a multisource listing would not relieve the generator of the costly and unnecessary requirement to handle the residue as hazardous waste.

Pioneer Americas and the Coalition for Responsible Waste Management were concerned that the creation of a new multi-source listing code could result in additional testing. They did not see the merits of requiring a complete battery of tests on incinerator ash simply because it had its

own multi-source listing code. As long as facility operators could use knowledge of the constituents of the original waste to decide which tests are appropriate for each batch of ash, they supported this concept.

Agency Response:

EPA discussed a possible multisource combustion waste listing in an advanced notice of proposed rulemaking (ANPRM) on land disposal restrictions published on June 19, 2000 (65 FR37932). EPA is currently evaluating comments on that ANPRM, and, if we decide to take action, would do so through a separate proposed rulemaking.

Issue Code: CMA10: Mixed Waste Incinerators have Special Concerns Associated with Sampling, Testing, and Handling Mixed Waste Combustion Residues

Comments: WH2P-00007, 3, 3

Comment Summary:

The Agency received one comment from DOE concerning mixed waste incinerators, in response to the Chemical Manufacturers Association's (CMA) proposals in the 1999 HWIR proposal. A copy of the comment is provided below.

“EPA explains that the Chemical Manufacturers Association (CMA) submitted a proposal to EPA that describes additional regulatory options for revising the mixture and derived-from rules. Among other things, the CMA proposal includes an option whereby residues from the combustion of listed hazardous waste would be exempt from the derived-from rule. As such, combustion residues would not be classified as hazardous simply because it is generated from the treatment of listed hazardous waste. It would be hazardous waste only if it exhibits one or more hazardous waste characteristics. EPA further explains that the Agency is considering another possible approach for addressing combustion residues, which would list these derived-from wastes under their own multi-source listing code.

In response to the proposed rule regarding air emission standards for hazardous waste combustors [61 FR 17358 (April 19, 1996)], DOE provided comments and follow-up information. In those documents, DOE discussed some of the special problems that mixed waste incinerators have, or may have, in complying with air emission standards and LDR treatment standards applicable to incineration residues. Specifically, DOE has advocated that EPA establish a separate subcategory for mixed waste incinerators for purposes of regulation under §112 of the Clean Air Act. In addition, DOE has recommended that EPA consider establishing a new waste code subcategory for radioactive high-mercury inorganic wastes in the Table of Treatment Standards for Hazardous Waste.

In light of such earlier communications, DOE encourages EPA to be mindful of the special concerns associated with sampling, testing, and handling mixed waste combustion residues as the Agency considers both the CMA proposal and/or adoption of any LDR treatment standards for hazardous waste combustion residues.”

Agency Response:

EPA appreciates DOE's input and comments to these rulemakings. EPA will be mindful of the special concerns associated with sampling, testing, and handling mixed waste combustion residues if the Agency decides to further pursue those aspects of the CMA proposal and/or adoption of any LDR treatment standards for hazardous waste combustion residues associated with mixed waste incineration residues.

Issue Code: CMA11: General Comments on Expanding the De minimis Exemption to F and K listed Wastes

Comments: WH2P-00019, 2, 2; WH2P-00037, 1, 2; WH2P-00005, 15, 1; WH2P-00014, 9, 2; WH2P-00017, 3, 1; WH2P-00046, 15, 6; WH2P-00042, 2, 1; WH2P-00041, 2, 3; WH2P-00033, 29, 3; WH2P-00030, 3, 3; WH2P-00019, 1, 2; WH2P-00009, 2, 4; WH2P-00034, 3, 4; WH2P-00029, 3, 1; WH2P-00027, 1, 3; WH2P-00035, 24, 1; and WH2P-00015, 7, 1

Comment Summary:

The Agency received comments from 16 commenters in response to the Chemical Manufacturers Association's (CMA) proposal to expand the de minimis exemption to F and K listed wastes as presented in the 1999 HWIR proposal. Of those comments, six were received from industries, four were from industry associations, three were from State Agencies, one was from a Federal Government Agency, one was from a waste management company, and one was from a waste management association. A summary of the specific issues raised by commenters is provided below.

California Department of Toxic Substances Control, ETC and Maine DEP did not support the exemption. They feared that the exemption might serve as an incentive for generators to spill or leak listed wastes if those wastes were eligible for an exemption. The current exemption exists for commercial chemical products and companies typically ensure that raw materials/products are handled in a manner which would minimize losses, as these materials/products are valuable. They did not believe that companies necessarily would take the same amount of care to prevent losses of listed wastes, if those wastes were exempt from Subtitle C.

Ohio EPA supported the exemption. However, they believed that rinsate from large hazardous waste containers that are rendered empty should be outside the definition of a de minimis loss. Large containers such as tanker trucks could contain substantial quantities (possibly hundreds of gallons) of hazardous waste since there is no economic incentive to retrieve as much of the waste as possible as there is for products. Such a volume of hazardous waste is outside the scope of losses that should be defined as de minimis and should not be defined as such.

Safety-Kleen stated that it was not clear from the preamble discussion what was meant by "rinsate from empty containers or from containers that are rendered empty by that rinsing." They noted that rinsate from containers that held hazardous waste generally contains concentrations of hazardous constituents which are at least as high as the original waste and may contain significant quantities of solids. The quantities used to rinse containers of this type also may be significant depending upon the level of contamination in the container. In some cases it is not possible to clean a container to the point of being "RCRA empty" and the container has to be disposed of as hazardous waste. This clearly does not constitute a de minimis loss. They believed that this issue must be clarified further before any exemption could be considered. An industry association commenter also noted that the CMA proposal did not identify adequately the

wastes for which the exemption would operate. Since RCRA-empty container rinsate is already exempt, the commenter believed it should be specified that any exemption need only address acute hazardous waste rinsate.

Onyx Environmental Services believes the expansion has merit but it does not contain specific enough detail to be useful when dealing with hazardous waste. The Agency must define what constitutes a “de minimis” loss of hazardous waste; what constitutes normal handling activities; and whether the exemption would apply during transportation.

The rest of the commenters supported expanding the de minimis exemption to F and K listed wastes. Several commenters believed that the exemption could be extended beneficially to cover the very small losses from the normal handling of F and K listed wastes. The stringent regulation of hazardous waste handling at the site of generation means that few losses of this type would be expected to occur. The ability to manage de minimis losses of F and K wastes as well as de minimis quantities of off-specification P and U wastes would ease RCRA compliance significantly without compromising the integrity of the NPDES wastewater treatment system or protection of human health and the environment.

The commenters noted that there was no reason to assume that a non-hazardous industrial wastewater treatment facility was any less capable of providing adequate treatment of the hazardous constituents found in F or K listed wastes than it is of handling those in P and U listed wastes. EPA's stringent container and tank management standards in 40 CFR Parts 264 and 265 Subparts I and J, and air emission standards in Subpart CC, serve as powerful incentives to properly manage these wastes to minimize the occurrence of "de minimis" losses. DoD supported the expansion, noting that it would provide to military installations the same level of regulation as is applicable to manufacturing industries currently. Safety-Kleen recommended that facilities wishing to take advantage of this exemption be required to develop and implement written Best Management Practices (BMP) for all loading, unloading and transfer operations which are designed to minimize spills and prevent abuse of the exemption.

The Independent Liquid Terminal Association questioned why EPA never has set out a scientific rationale by which it reserves the discriminatory use of the de minimis rule to those engaged in the manufacturing process and denies it to all others, including stand-alone bulk liquid commercial chemical storage terminals. They also suggested that de minimis losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers, leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing.

SOCMA believed that there would be significant benefit from allowing de minimis losses of

commercial chemical products from laboratories to be covered by the current regulatory exemption. The types of commercial chemical products being used and tested in the laboratory also could be expected to be amenable to effective treatment in an on-site wastewater treatment system. They noted that significant time, effort and cost is involved in segregating and capturing these types of de minimis losses from on-site laboratories.

Agency Response:

EPA is considering the possibility of expanding the current de minimis exclusion for wastes managed in a wastewater treatment system subject to the Clean Water Act. However, EPA is concerned about the possible negative incentives that might result from extending the de minimis exemption to wastes listed in 40 CFR 261.31 and 261.32 (F and K wastes, respectively). As noted in the comments, there is a direct economic incentive to ensuring that raw materials/products are handled in a manner which would minimize losses, as these materials/products are valuable. This incentive does not exist for hazardous waste. The concept of “de minimis” is also variable, depending on the quantities of material handled and the relationship of those quantities with the flowrate of the facility’s wastewater treatment plant. However, EPA realizes that separation of small leaks of certain hazardous wastes can sometimes be impractical.

One possible approach would be to base the concept of “de minimis” on some fixed quantity of the waste, such as a Reportable Quantity (RQ) in Superfund regulations (see 40 CFR 302.4 and Table 302.4.) By statute, all hazardous wastes must be given an RQ. EPA may pursue the concept of de minimis related to RQs (or some fraction or multiple thereof). If we do decide to pursue such a change, we would do so through a proposed rulemaking.

Issue Code: CMA12: Relationship of LDRs to the CMA Proposal

Comments: WH2P-00001, 3, 1; WH2P-00046, 7, 4; WH2P-00033, 18, 4; and
WH2P-00015, 2, 4

Comment Summary:

The Agency received comments from four commenters concerning the relationship of land disposal restrictions (LDRs) to the Chemical Manufacturers Association's (CMA) proposals as listed in the 1999 HWIR proposal to modify the mixture and derived-from (MDF) rules. Of those comments, two were received from industries, one was from a waste management company, and one was from an industry association. A summary of the specific issues raised by commenters is provided below.

BP Amoco Oil suggested that new point of generation and/or treatability group designation be applied to the wastes exempted under the CMA proposals. For derived-from materials, they further suggested that EPA could determine that meeting the LDR treatment standards for the original listed waste would be required also. Perusal of the delisting petitions which have been granted for specific wastes indicates that the delisting exemptions have allowed for metal concentrations greater than UTS levels in some cases. They did not understand why the additional volumes of low-risk materials, which would be disposed in Subtitle D landfills, would represent any change in protection of human health and the environment. There is a significant volume of non-hazardous material already being disposed in Subtitle D landfills that has constituent concentrations higher than those in these materials (e.g. materials that are originally non-hazardous wastes and which have never been subject to LDR requirements). In addition, standards for Subtitle D facilities have changed significantly since the MDF rules were first formulated.

Occidental Chemical Corporation and CMA stated that LDR's need not be a barrier to adopting the reforms proposed by CMA. For CMA suggestions revising the mixture rule, the LDR's would not apply. Under the current mixture rule exemptions for solvents and de minimis losses, LDR's do not attach to these wastes. For CMA suggestions revising the application of the derived-from rule by making the creation of treatment residue a new point of generation, the LDR applicability would be evaluated at that point. If the residue exhibited a characteristic of hazardous waste and is going to be land disposed, then it would be subject to the LDR program. There are cases in which the Agency has modified strict interpretation that LDRs attach to hazardous waste at the point of generation and continue to apply even if a waste ceases to be classified as hazardous. They state that EPA either has excluded requirements to meet LDRs or attached LDRs at a different point. The commenters believe that EPA should declare that LDRs do not apply to wastes that exit Subtitle C through promulgated regulations. Citing the Third Third rule, the commenter noted that EPA concluded that it has the discretion to apply LDRs "at the point of generation or at the point of disposal (and possibly at some other point or combination of the two)". Also, in several cases under current EPA rules, LDRs attach, but then cease to apply, after the point of generation: If a waste is excluded from the definition of "solid" waste or "hazardous" waste under 40 CFR 261.2-261.6, then the waste also is exempt from the

requirements of Part 268. Thus, the exclusions override the LDRs.

Onyx Environmental Services believes that combustion residue should meet the applicable organic treatment standards pursuant to 268.40, and must meet the Universal Treatment Standards in 40 CFR Part 268.48 for metal constituents. If the residue exhibits a characteristic for metals (D004 – D011), the residue would remain subject to 268.40 standards that apply to the characteristic metal. This approach provides a sensible, workable exemption for combustion residues, while still protecting human health and the environment.

Agency Response:

If EPA develops a version of one or more of the exemptions suggested by the CMA, we will also address the issue of applicability of land disposal restrictions. We note, however, in the case of biological treatment and combustion that the intended purpose of these treatment technologies is often to meet the land disposal restriction standards. If the residuals do not meet these standards, then the original intent of the treatment has not been accomplished.