

US EPA ARCHIVE DOCUMENT

Appendix D: Full Text of Comments from 1995 and 1999 HWIR Proposals
on the Suggestions by the Chemical Manufacturers Association (CMA)
to Revise the Mixture and Derived-from Rules

CMA1
General Comments on the CMA Proposals

CMA1 - SOCMA, WH2P-00035, 1,3 Industry Assn.

[...] SOCMA also supports the type of regulatory options submitted by CMA and urges EPA to pursue these and other regulatory reforms. [...]

CMA1 - ASTSWMO, WH2P-00002, 1,3 State

[...] In general, the Task Force does not support the proposals submitted by Chemical Manufacturers Association to exempt waste from the derived-from rule.

CMA1 - General Electric Corp., WH2P-00005, 1,2 Industry

[...] Proposals made by the Chemical Manufacturers' Association (CMA) would provide meaningful relief and are natural extensions of existing rules; GE urges their adoption. Finally, we offer a few preliminary comments on the general framework being considered for a future rulemaking that would contain exit levels.

ICR1, MDF10 & CMA1 - Methacrylate Producers Assn., WH2P-00020, 1,2 Industry Assn.
MPA has three main comments. First, MPA endorses EPA's efforts to modify the mixture and derived from rules. Second, EPA should ensure that existing delisting petitions for substances that are currently included in Appendix VIII of 40 CFR Part 261 be considered promptly in the order in which they are submitted. Third, MPA endorses the regulatory approach identified in the Chemical Manufacturers Association (CMA) letter to EPA of August 18, 1999. These three main issues are discussed below.

CMA1 - CMA Panels, WH2P-00039, 6,1 Industry Assn.

The Panels Supports the Additional Reforms Proposed by CMA In a letter to EPA dated August 18, 1999, CMA proposed five additional reforms which, if implemented, would significantly reduce the over-regulation of low risk wastes. The Panels strongly support these proposed reforms and joins in the comments submitted by CMA on these issues. Although the Panels view the current proposed modification to the derived-from rule as a significant step, the Panels also believe that further reforms are necessary to achieve EPA's policy objectives with respect to reducing over-regulation of low risk wastes. Adoption of the proposals contained in the CMA letter would further reduce unnecessary regulation of low risk, de-characterized combustion residuals, leachates and wastewaters. For many of the same reasons set forth in these comments, CMA's proposals represent legally valid means for EPA to eliminate unnecessary regulation in a manner consistent with protecting human health and the environment. [...]

CMA1 - Basic Acrylic Monomer Manufacturers, WH2P-00021, 10,2 Industry Assn.
The Approach Proposed By CMA Will Apply To A Broader Group of Wastes That Do Not

Present Significant Risks. The CMA changes represent a different approach towards reducing the unnecessary application of RCRA requirements to wastes that present no significant risks. CMA's approach is non-chemical specific. Thus the changes to the RCRA requirements would apply to a broad range of wastes rather than just the 29 specific hazardous waste constituents currently listed in EPA's proposal. The broader application of the CMA proposals merits consideration. This is a distinct advantage of the CMA proposals. The relief offered from the overbroad application of RCRA requirements by EPA's proposal is extremely focused and offers no relief if the waste contains constituents other than the 29 categories currently proposed. CMA's proposal takes advantage of other regulatory requirements (example: Clean Water Act) that can provide more precise decisions regarding the suitability of treating a waste as hazardous. Requiring a chemical specific analysis of each waste constituent before modifying the HWIR requirements will delay significant changes to the rule and will also unnecessarily burden regulatory resources. Efficient use of existing requirements, rather than the wholesale application of multiple layers of requirements, will aid in reducing unnecessary requirements while still ensuring appropriate treatment of wastes. The CMA approach is not mutually exclusive with the proposal published in the Federal Register. Both approaches offer relief from the unnecessary application of hazardous waste requirements to relatively benign wastes. BMM concludes that EPA should also pursue changes to the HWIR requirements based on the regulatory approach proposed by CMA.

CMA1 - Basic Acrylic Monomer Manufacturers, WH2P-00021, 12,1 Industry Assn.
EPA should also consider adopting changes of the type proposed by CMA to the RCRA requirements. By attempting to reduce unneeded and duplicative requirements, the CMA proposals are examples of the types of available opportunities for the Agency to provide much delayed relief from unnecessary and burdensome requirements. These requirements currently apply to significant quantities of waste that present an insignificant level of risk to humans and the environment.

CMA1 - General Electric Corp., WH2P-00005, 5,1 Industry
GE Supports Proposals for Reform Made by Chemical Manufacturers' Association In August 1999, the Chemical Manufacturers' Association (CMA) presented five potential regulatory changes to the mixture and derived-from rule for EPA's consideration. These proposals were submitted to show that important gains could be made in rationalizing the hazardous waste program by addressing a few specific situations, even absent a full list of exit levels in the HWIR proposal. GE is a member of CMA, and strongly supports finalization of each of the five potential changes identified. Detailed supporting arguments will be provided in CMA's comments on this rule; however, GE believes it is important to review these proposals briefly and provide examples of the very concrete ways in which GE businesses are impacted by the current regulations. The first three options propose exemptions from the derived-from rule; the fourth and fifth focus on exemptions from the mixture rule.

CMA1 - USWAG, WH2P-00010, 4,6 Utility Co./Assn.
If EPA proceeds with re-promulgation of the mixture and derived-from rules, EPA should adopt the revisions to the mixture and derived-from rules proposed by the Chemical Manufacturers Association.

CMA1 - NEDA RCRA, WH2P-00012, 2,1 Industry Assn.

NEDA RCRA also supports the regulatory changes to the mixture and derived-from rule advanced by the Chemical Manufacturers' Association (CMA). NEDA RCRA believes that the revisions submitted by CMA are sensible, consistent with EPA's authority under RCRA, and would provide meaningful reform without sacrificing protection of human health and the environment.

CMA1 - Phillips Petroleum Co., WH2P-00014, 3,2 Industry

Phillips supports the proposals made by the Chemical Manufacturers' Association (CMA) on revisions to the mixture and derived-from rules and believes that its proposals would provide initial additional relief from the overregulation perpetuated by the overarching application of the mixture and derived-from rules. Phillips credits EPA for soliciting public comment on these approaches and encourages EPA's adoption of these approaches in the final HWIR rule. However, 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.

CMA1 - Phillips Petroleum Co., WH2P-00014, 4,3 Industry

Phillips Supports Specific Proposals for Reform Made by the Chemical Manufacturers' Association In August 1999, the Chemical Manufacturers' Association (CMA) presented five potential regulatory changes to the mixture and derived-from rule. To EPA's credit it has included for public comment the CMA reform proposals. Phillips supports promulgation of the five proposed reforms.

CMA1 - Methacrylate Producers Assn., WH2P-00020, 3,1 Industry Assn.

CMA proposed a series of changes to the RCRA requirements in a letter submitted to EPA on August 18, 1999. These proposals provide an alternate method of providing relief from unnecessary classification of waste as hazardous. The main thrust of the CMA comments were directed at eliminating unnecessary requirements that apply solely based on the pedigree of the wastes (its origin and processing history) rather than the actual waste properties. EPA included a summary of CMA's proposals and requested comment on the proposals. 64 Fed. Reg. 63388. MPA strongly endorses regulatory approaches similar to that proposed by CMA which are based on the current condition of the wastes, and not on how the waste came to its current condition. Such an approach will treat similar wastes consistently and avoid unnecessary and duplicative requirements. EPA should consider approaches, such as those proposed by CMA, which can provide significant and much needed relief in an across the board fashion. Please contact me at (202) 637-9040 if you have any questions regarding MPA's comments on the HWIR proposal.

CMA1 - Basic Acrylic Monomer Manufacturers, WH2P-00021, 9, 2 Industry Assn.

EPA SHOULD ALSO CONSIDER ADOPTING CHANGES TO THE HWIR SIMILAR TO THOSE PROPOSED BY CMA. The Chemical Manufacturers Association (CMA) proposed a series of changes to the RCRA requirements in a letter submitted to EPA on August 18, 1999. A copy of the CMA proposals is included as Attachment B to these comments. The CMA proposals

provide an alternate method of providing relief from unnecessary classification of waste as hazardous. EPA included a summary of CMA's proposals and requested comment on the proposals. EPA should consider approaches, such as those proposed by CMA, which can provide significant and much needed relief on an across the board fashion. A. Changes Of The Type Proposed By CMA Will Reduce Unnecessary Requirements and Costs Associated With The Current HWIR Regulation. CMA has proposed five changes to the RCRA requirements. These changes include expanding the exclusion from RCRA of wastewaters already regulated under the Clean Water Act and managed in NPDES or CWA treatment systems, including a de minimis wastewater exception for handling of routine losses of F and K listed wastes, regulating wastes derived from the treatment of wastewater as a newly generated waste (a new point of generation), regulating wastes derived from the generation of leachate as a newly generated waste (a new point of generation), and regulating wastes derived from the combustion of hazardous waste as a newly generated waste (a new point of generation). These changes attempt to utilize existing regulations to adequately control wastes, while avoiding the overbroad application of the mixture and derived from rules. Wastes meeting these criteria would still be controlled under existing regulations. However, if the resulting waste does not exhibit the characteristics that initially resulted in its designation as hazardous, these changes would recognize this fact and result in the application of more appropriate controls. These types of changes would ensure significant quantities of low risk materials are no longer required to be handled in a burdensome manner. These proposed changes are examples of the types of modifications to the HWIR requirements that should be considered because they offer the potential for significantly improving the efficiency of the hazardous waste program, while still providing appropriate controls.

CMA1 - Duke Power, WH2P-00022, 3,4 Utility Co./Assn.

If EPA proceeds with re-promulgation of the mixture and derived-from rules, EPA should adopt the revisions to the mixture and derived-from rules proposed by the Chemical Manufacturers Association.

CMA1 - Pioneer Americas, WH2P-00036, 2,1 Industry

As alternatives to rescinding altogether the mixture and/or derived-from rules, EPA discusses 5 proposals from the Chemical Manufacturers Association (CMA), as well as EPA's own proposal to revise the mixture and derived-from rules for wastes listed solely for ignitability, corrosivity, and/or reactivity. Pioneer supports CMA's proposals. A generator who carries out an integrated management program which removes the hazards for which a waste was listed; follows all of EPA's requirements for proper handling and treatment under RCRA, the Clean Water Act, and the Clean Air Act; and which produces a residue which is both chemically and physically different from the waste EPA considered when originally listing the waste, should be rewarded as accomplishing all EPA's goals under RCRA, not punished by requirements to continue to handle the residue as a hazardous waste when the hazard no longer exists. CMA's proposals do just that by presenting specific circumstances (combustion residues, leachate from land disposal of listed wastes which is subsequently managed in a system regulated under the Clean Water Act, sludges from aggressive biological treatment of listed wastewaters) where the removal of the hazards which cause 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.

CMA1 - SOCMA, WH2P-00035, 22,3 Industry Assn.

SOCMA Supports the Type of Regulatory Options Submitted by CMA and Urges EPA To Pursue These and Other Regulatory Reforms In the preamble to the HWIR Proposal, EPA acknowledged its receipt of a letter from the Chemical Manufacturers Association (CMA) identifying five additional regulatory options, including suggested regulatory language, for providing relief from the mixture and derived-from rules. The preamble briefly describes each of the five regulatory options and also sets out the suggested regulatory language provided by CMA. 64 Fed. Reg. 63386-88. SOCMA generally supports each of the options suggested by CMA. Based upon preliminary discussions with members, SOCMA recommends that EPA pursue further development of each of these options. While SOCMA did not identify any members that anticipated benefiting from the exemption for leachate, various members expressed specific interest in and support for each of the other options.

CMA1 - CMA, WH2P-00033, 3,4 Industry Assn.

In coming to these realizations, CMA began to look for other ways to address the over-regulation created by the mixture and derived-from rules that could be implemented by the court ordered deadline. After much discussion -- and an internal criteria that our recommendations must be relatively simple, based largely on existing exemptions and interpretations, -- we ultimately developed five recommendations that we believe are implementable as part of an April 2001 final rule: 1. EPA should establish a new point of generation for residues derived from aggressive biological treatment of hazardous wastewaters; 2. EPA should establish a new point of generation for residues of hazardous waste combustion; 3. EPA should establish a new point of generation for leachate generated from hazardous waste landfills and land treatment units; 4. EPA should update and establish an alternative, analytic method to qualify for the headworks exemption; and 5. EPA should expand the existing de minimis exclusion to include RCRA F and K wastes. CMA believes that, if adopted in EPA's final rule responding to the consent decree in ETC v. Browner, these recommendations will not only cure long-standing problems with the mixture and derived-from rules, but also fulfill the requirements of the consent decree and the statutory mandate Congress originally imposed in 1992. 1. For the purpose of this discussion wastewater covers a broad category of liquid wastes amenable to treatment in a well-operated wastewater treatment system. It is broader than the 40 C.F.R. 268.2 (f) Land Disposal Restriction definition of wastewater (...contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS)).

CMA1 - CMA, WH2P-00033, 17,5 Industry Assn.

In Addition to the Exemptions Proposed, EPA Should Adopt in its Final Rule The Five Revisions to the Mixture and Derived-From Rules Recommended by CMA. CMA very much appreciates EPA including our recommendations for revising the mixture and derived-from rules in five specific ways. We believe these recommendations, if adopted, will provide much needed relief from unnecessary regulatory burdens created by the Agency's mixture and derived-from rules.

Indeed, the Agency recognized such over-regulation when it promulgated these rules in 1980. Again in 1992 EPA acknowledged the huge scope of the problem: [M]illions of tons of mixtures and derived-from residuals that must be managed as hazardous waste because of their history . . . may actually pose quite low hazards. . . EPA believes that low-risk wastes should not be subject to full subtitle C control.² CMA developed these five recommendations to provide another way of addressing the over-regulation problem. Keeping in mind that the Agency faces resource constraints, we limited ourselves to solutions that are based on other Agency rules, and therefore consistent with traditional RCRA policies. We believe that these suggestions can be promulgated as final rules by April 30, 2001, thereby helping EPA meet its deadline for revising the mixture and derived-from rules. Because these additional exclusions expand upon prior Agency decisions and are consistent with protecting human health and the environment, they should be easy to implement. Because of their similarity to other provisions in the RCRA's base rules, they are likely to be adopted in authorized state programs. Finally, because the exclusions address materials that clearly should not be regulated as listed hazardous wastes, the Agency's adoption of the exclusions should not be unduly controversial. We think these recommendations provide the best opportunity for the Agency to provide immediate and substantive regulatory relief for some specific low-risk, high-volume wastes in a protective and responsible fashion. We are strongly committed to making progress on the long-overdue goal of actually letting some low-risk wastes exit Subtitle C, as we know the Agency is. EPA has raised several questions regarding the recommendations. We have addressed the most critical issues, such as application of Land Disposal Restrictions, below, and are anxious to continue discussions with EPA staff and others over the details of these recommendations.

CMA1 - BP Amoco Oil, WH2P-00001, 3,1 Industry

We support the changes to the derived from rule which have been suggested by CMA. The current application of derived from rule requirements to 1.) residues (solids, ashes, scrubber waters) from combustion of listed wastes, 2.) leachate from land disposal of listed waste that is managed in Clean Water Act systems, and 3.) sludges from aggressive biological treatment of listed hazardous wastes over-regulates these low-risk materials. Each of these materials is chemically and physically different than the listed waste from which it is derived. Minor rule changes can be made to better align regulatory requirements for derived from materials such as these with their actual risk to human health and the environment. The suggested rule changes take into account the effectiveness of the incineration process (essentially all organic constituents are removed from the original listed waste), the effectiveness of wastewater treatment processes (Clean Water Act requirements), and the RCRA land disposal restriction requirements - all of which have been implemented since the original mixture and derived from rules were finalized. [...]

CMA1 - USWAG, WH2P-00010, 11,2 Utility Co./Assn.

EPA Should Adopt the Revisions to the Mixture and Derived-From Rules Proposed by the Chemical Manufacturers Association. If EPA chooses to proceed with re-promulgation of the mixture and derived-from rules despite the arguments in section I of these comments, USWAG supports the recommended revisions to the mixture and derived-from rules provided by the Chemical Manufacturers Association (CMA). Id. at 63386-88. Specifically, CMA requests that EPA exempt from any re-promulgated derived-from rule the following wastes unless they exhibit

a hazardous waste characteristic: Residues from the combustion of listed hazardous wastes; Leachate from the land disposal of listed hazardous waste; and sludges from the biological treatment of listed hazardous wastewaters. As CMA argues, these waste derivatives differ from the parent wastes in physical and chemical characteristics. The blanket regulation of such derivatives based on the parent wastes imposes burdens that do not reflect the lower risks associated with these wastes. Therefore it is appropriate to regulate these waste streams only if they exhibit a hazardous waste characteristic.

CMA1 - DoD, WH2P-00017, 2,1

Federal Govt.

DoD Response to EPA's Section XXVI, Request for Comments, Question Number I - Merits and Drawbacks of Revisions Submitted By the Chemical Manufacturers Association (CMA)

COMMENT 1a. Exemption of Combustion Residue, Leachate, and Sludge Comment. Regarding the CMA request for an exemption for residues from the combustion of listed hazardous waste, for an exemption for leachate from land disposal of listed hazardous waste that is subsequently managed in a Clean Water Act (CWA) system, and for an exemption for sludge from the aggressive biological treatment of listed hazardous wastewater, the Department of Defense (DoD) supports the approach. Discussion. The listed wastes described in the CMA petition, such as combustion residues, hazardous waste leachate and sludges, represent low hazards due to the degree of treatment afforded by hazardous waste incinerators and by aggressive biological wastewater treatment systems. Hazardous waste incinerators are required to meet a destruction and removal efficiency of at least 99.99% for organics. Nevertheless, classification of these wastes as hazardous following treatment adds to the cost of treatment and disposal of these wastes, even though the wastes contain extremely low levels of regulated hazardous waste constituents. CMA is correct in asserting that combustion and aggressive biological treatment, as is often required under the National Pollutant Discharge Elimination System (NPDES) program or the National and Local Pretreatment Standards, can greatly reduce or eliminate organic chemicals. In addition, wastewater discharges and wastewater treatment operations are already regulated under the CWA and should not be subject to dual regulation under the Resource Conservation and Recovery Act (RCRA). Furthermore, listed hazardous wastes are currently required to be treated in accordance with the technologies and the concentration limits specified under the land disposal restrictions (LDRs). In general, LDRs are designed by EPA to reduce contaminants based on best demonstrated available technology. Subsequent regulation, following treatment to LDR standards, is duplicative and costly to hazardous waste generators. Recommendation. DoD supports the CMA's proposed modification to 40 CFR 261.3(c)(2)(ii).

CMA1 - Duke Power, WH2P-00022, 6,3

Utility Co./Assn.

EPA Should Adopt the Revisions to the Mixture and Derived-From Rules Proposed by the Chemical Manufacturers Association. If EPA chooses to proceed with re-promulgation of the mixture and derived-from rules despite the arguments in section I of these comments, Duke Power supports the recommended revisions to the mixture and derived-from rules provided by the Chemical Manufacturers Association (CMA). Id. at 63386-88. Specifically, CMA requests that EPA exempt from any re-promulgated derived-from rule the following wastes unless they exhibit a hazardous 'waste characteristic: Residues from the combustion of listed hazardous wastes;

Leachate from the land disposal of listed hazardous waste; and Sludges from the biological treatment of listed hazardous wastewaters. As CMA argues, these waste derivatives differ from the parent wastes in physical and chemical characteristics. The blanket regulation of such derivatives based on the parent wastes imposes burdens that do not reflect the lower risks associated with these wastes. Therefore it is appropriate to regulate these waste streams only if they exhibit a hazardous waste characteristic. [...]

CMA1- BP Amoco Oil, WH2P-00001, 3,4 Industry

We support changes to the mixture rule such as those suggested by CMA. The suggestions regarding: 1.) expansion of the headworks exemption and 2.) modification to the de minimis loss exemption make common sense and expand upon prior Agency decisions. They are logical additions to existing rules.

CMA1- SOCMA, WH2P-00035, 22,5 Industry Assn.

A. Options To Exclude Specific Waste Derivatives from the Mixture and Derived-from Rules
Three of the regulatory options developed by CMA focus on the exclusion of certain categories of waste derivatives from the mixture and derived-from rules. Specifically, CMA recommends exempting the following waste categories from the application of the mixture and derived-from rules: (1) Wastes derived from burning any listed hazardous waste in a permitted or interim status hazardous waste combustion device; (2) Leachate derived from landfills or land treatment units containing listed hazardous waste, which is managed in a wastewater treatment system the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater); and (3) Wastes derived from the aggressive biological treatment of listed hazardous wastewaters in a wastewater treatment system the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater). 64 Fed. Reg. at 63387. The rationale offered by CMA for each of these exclusions is the same that the wastes derived under each of these scenarios from the treatment of listed hazardous wastes are both physically and chemically dissimilar from the wastes that were originally listed. 64 Fed. Reg. at 63386. SOCMA members have indicated a desire for EPA to pursue consideration of each of these options. Various members have expressed particular support for the exemption for combustion residues and for aggressive biological treatment sludges. In each instance, members' experience was consistent with the position put forward by CMA, i.e., that the residues being addressed were substantially different from the wastes considered by EPA in developing the listed waste classifications. A substantial number of SOCMA members indicated that action on an aggressive biological treatment system exemption could be particularly valuable, since it could allow these systems to manage wastewaters that are currently shipped off-site at great expense in order to avoid regulation of sludge under the mixture and derived-from rules.

CMA1 - ETC, WH2P-00034, 2,4

Waste Mgmt. Assn.

Comment on Other Regulatory Options The five regulatory options submitted by the Chemical

Manufacturers Association, 64 Fed. Reg. at 63,386-88, are not supported by an analysis of their potential health and environmental impacts. The ETC believes that EPA should fully analyze these options and provide a full proposal for public comment before proceeding. However, we offer our initial comments at this time. [...]

CMA1 - TXU Business Services, WH2P-00008, 2,1 Utility Co./Assn.

TXU supports the revisions provided by the Chemical Manufacturers Association (CMA). CMA requests that EPA exempt the following wastes unless they exhibit a hazardous waste characteristic: residues from the combustion of listed hazardous wastes; leachate from the land disposal of listed hazardous wastes; and sludges from the biological treatment of listed hazardous wastewaters. As CMA argues, these waste derivatives differ from the parent wastes in physical and chemical characteristics. The blanket regulation of such derivatives based on the parent wastes imposes burdens that do not reflect the lower risks associated with these wastes. Therefore, it is appropriate to regulate these waste streams only if they exhibit a hazardous waste characteristic.

CMA1 - Basic Acrylic Monomer Manufacturers, WH2P-00021, 2,3 Industry Assn.

[...] BAMB also concludes that EPA should pursue additional changes to the HWIR requirements based on the types of approaches proposed by CMA. See Part IV, below.

CMA1 - CMA, WH2P-00033, 1,3 Industry Assn.

CMA is pleased that EPA is soliciting public comment on five recommendations CMA put forth to reform the mixture and derived-from rules for specific treatment residues and certain dilute mixtures. Specifically, CMA recommends that EPA: 1. Establish a new point of generation for residues derived from aggressive biological treatment of hazardous wastewaters; 2. Establish a new point of generation for residues of hazardous waste combustion; 3. Establish a new point of generation for leachate generated from hazardous waste landfills and land treatment units; 4. Establish an alternative, analytic method to qualify for the headworks exemption; and 5. Expand the existing de minimis exclusion to include RCRA F and K wastes. In crafting these recommendations CMA relied on new applications of existing RCRA exemptions and EPA policies. For these reasons, we believe they can be promulgated as part of the final April 30, 2001 rule. CMA will continue to work with EPA and other stakeholders to finalize these reforms.

CMA1 & CMA7 - Eastman Chemical Co., WH2P-00050, 2,2 Industry

EPA should promulgate in its final rule the options proposed by CMA for providing relief for certain high-volume, low-risk wastes. 4) The exemption of non-characteristic biosludges from the aggressive biological treatment (ABT) of wastewaters would provide the greatest regulatory relief for high-volume, low-toxicity waste streams to both Eastman and the chemical industry in general. 5) Those wastes exempted would still be managed appropriately and in accordance with solid waste management requirements appropriate for each state. 6) Eastman would realize cost

savings in the area of \$61 million to \$76 million if ABT biosludges that do not exhibit a characteristic were exempted from the derived-from rule.

CMA1 & CMA7 & CMA 8 - Eastman Chemical Co., WH2P-00050, 3,1 Industry
IV. EPA SHOULD ADOPT IN ITS FINAL RULE THE OPTIONS PROPOSED BY CMA FOR PROVIDING RELIEF FOR CERTAIN HIGH-VOLUME, LOW-RISK WASTES The MDF rules have added significant costs to the operation of manufacturing facilities throughout the nation, while providing insignificant benefits to human health and the environment. CMA submitted to the Agency various options that would provide immediate relief to MDF wastes, upon promulgation of a final rule. Eastman participated in the development of those options and fully endorses their adoption, as well as incorporates by reference the comments submitted to EPA by CMA in response to this proposal. Eastman commends the Agency for including a discussion of the options in its proposed rule (64 FR 63386-63388). While each of the options will provide relief to a number of companies, the one of primary interest to Eastman and the chemical industry is the one affecting wastewater residues, primarily the biosludge. Eastman also has some interest in the option exempting residues from hazardous waste combustion. Eastman is not unique among manufacturing facilities in believing that the existing MDF rules are capturing many treatment residue waste streams that do not warrant management as hazardous wastes. Indeed, even EPA has considered treatment residues as the major candidate streams for an exit from RCRA Subtitle C. CMA's options would provide the Agency an opportunity to amend existing RCRA code now, separate from any modeling effort to derive risk-based exit levels. Because this proposed rule does not address MDF holistically and only minimally improves the current situation, Eastman believes EPA should further target some specific wastes streams, particularly residues where listed wastes have been treated. The reduction in regulatory burden would be significant. Under CMA's options, whether considering treatment residues from aggressive biological treatment systems (ABTs) or from combustion units, the residues themselves would be viewed as a new point of generation." This is appropriate, because the residues (biosludges from wastewater treatment; ashes and other types of streams from combustion) are both physically and chemically different from the original listed hazardous waste from which they are derived. In each case, they are high-volume, low-risk wastes currently and historically managed as hazardous under RCRA Subtitle C at a very high cost to the generating facilities. It is Eastman's position that if these wastes do not exhibit a characteristic, they can be safely managed under state-managed, Subtitle D waste management programs. Further, Eastman believes that: EPA clearly has the authority to exempt these residues from the derived-from rule; EPA has the authority to conditionally" exempt these residues from the derived-from rule; and EPA has now and has always had the authority to list as hazardous specific residue streams it determines should be regulated as hazardous waste. In separate sections below, the options relevant to ABT biosludges/treated wastewaters and combustion residues and the rationale for their exemption are discussed.

CMA1 - Eastman Chemical Co., WH2P-00050, 9,4 Industry
C. Other CMA Options Should Also be Adopted CMA also submitted options to the Agency related to the headworks exemption, an expansion of the de minimis exemption and leachate from landfills. Eastman endorses those options, but because our facilities are not directly affected by

them, CMA's positions and statements are incorporated into these comments by reference, without direct comment by Eastman.

CMA1 - Eastman Chemical Co., WH2P-00050, 10,5 Industry

EPA is encouraged to adopt in its final rule the CMA options included in the proposal for comment. Those options will amend existing RCRA code, prevent the continued, costly overregulation of certain waste streams and allow certain high-volume, low-risk waste to be adequately managed under states' Subtitle D programs.

CMA1 - Eastman Chemical Co., WH2P-00050, 11,3 Industry

Eastman also supports the CMA options related to the headworks exemption, the landfill leachate exemption, and an expansion of the de minimis exemption. All would minimize the overregulation and burden of the RCRA program.

CMA1 - Eastman Chemical Co., WH2P-00050, 11,5 Industry

The economic benefits associated with the CMA options are significant. At Eastman alone, nearly 150,000 tons of biosludge could be exempted at a cost savings of \$61 million to \$76 million.

CMA2
General Comments on the Headworks Exemption

CMA2 & CMA3 & CMA5 - Duke Power, WH2P-00022, 6,3 Utility Co./Assn.
[...] In addition, Duke Power supports the CMA recommendations for specific modifications to any re-promulgated mixture rule to expand the headworks exemption in 40 C.F.R. §§ 261.3(a)(2)(iv)(A) and (B). CMA recommends that EPA allow direct monitoring of the actual concentration of spent solvents in untreated wastewater to demonstrate compliance (rather than the currently required weekly mass balance); extend the exemption to the solvents benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane; and extend the exemption to multi-source leachate (F039) derived solely from the disposal of the spent solvents in 40 C.F.R. § 261.31. Duke Power believes that these modifications would provide continuity to the headworks provisions and facilitate documentation of compliance through direct monitoring. Such improvements are necessary to limit the overbreadth of the mixture and derived-from rules, in the event EPA proceeds with re-promulgation.

CMA2 & CMA3 - SOCMA, WH2P-00035, 23,2 Industry Assn.
B. Option To Expand the Current Headworks Exemption As a fourth option, CMA has asked EPA to consider an expansion of the current headworks exemption provision set out in 40 C.F.R. § 261.3(a)(2)(iv)(A) and (B). The so-called headworks provision exempts from the mixture rule wastewaters containing small amounts (either 1 ppm or 25 ppm) of particular F-listed solvents based on the mass balance flow of the solvents into the headworks of a Clean Water Act regulated industrial wastewater treatment system. CMA's option would expand their current exemption in three ways: (1) Allow direct monitoring of the actual concentration of spent solvents in untreated wastewater as a means to demonstrate compliance; (2) Add benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane to the list of chemicals covered by the exemption; and (3) Allow multi-source leachate (F039) derived solely from the disposal of spent solvents to be eligible for the exemption. SOCMA members strongly support this exemption and believe that their operations would particularly benefit from being able to use direct monitoring of the actual concentration of spent solvents in untreated wastewater as a means to demonstrate compliance. In many instances, the difficulty of using the mass-balance approach that is presently required has prevented SOCMA members from relying on the headworks exemption.

CMA2 - General Electric Corp., WH2P-00005, 14,3 Industry
Second, 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. Of particular interest in this regard is benzene, which is sometimes present as a minor component or impurity in another solvent.

CMA2 - USWAG, WH2P-00010, 12, 2 Utility Co./Assn.

In addition, USWAG supports the CMA recommendations for specific modifications to any re-promulgated mixture rule to expand the headworks exemption in 40 C.F.R. §§ 261.3(a)(2)(iv)(A) and (B). CMA recommends that EPA allow direct monitoring of the actual concentration of spent solvents in untreated wastewater to demonstrate compliance (rather than the currently required weekly mass balance); extend the exemption to the solvents benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane; and extend the exemption to multi-source leachate (F039) derived solely from the disposal of the spent solvents in 40 C.F.R. § 261.31. USWAG believes that these modifications would provide continuity to the headworks provisions and facilitate documentation of compliance through direct monitoring. Such improvements are necessary to limit the overbreadth of the mixture and derived-from rules, in the event EPA proceeds with re-promulgation.

CMA2 & CMA3 - DOD, WH2P-00017, 2,2 Federal Govt.

COMMENT lb." Headworks" Expansion Comment. DoD supports the CMA proposal to expand the "headworks" exemptions in 40 CFR 261.3(a)(2)(iv)(A) and (B). Discussion. Expansion of the headworks exemption in 40 CFR 261.3(a)(2)(iv)(A) and (B) to allow direct monitoring of spent solvent concentrations, to include the spent solvents added by EPA in 1986, and to include multi-source leachate derived from the disposal of these solvents, constitutes a reasonable change to current regulations. The suggested changes would provide accurate data at the point the wastewater enters the treatment system, but would still allow generators who rarely discharge solvents into their wastewater systems to use the current method for verifying compliance with the 1 ppm/25 ppm standards. [...]

CMA2 - DoD, WH2P-00017, 2,2 Federal Govt.

[...] Recommendation. DoD recommends that EPA adopt the CMA's suggestion to expand the "headworks" definition to include alternate methods for verifying compliance, the four newly added solvents, and multi-source leachate derived from the disposal of these solvents and no other listed hazardous wastes. Reference. Request for comments 64 FR 63458, Section XXVI, Question #1 and 64 FR 63387, middle column CMA suggested language for 40 CFR 261.3(a)(2)(iv)(A) and (B).

CMA2 - NY Dept. of Env. Conservation, WH2P-00048, 5,1 State

CMA's Recommendations on Headworks Exemption This Department agrees that the headworks exemption in 40 CFR 261.3 (a)(2)(iv)(A) and (B) should be both expanded and modified. The expansion would include benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane, chemicals that were added to the list of spent solvents in 1986. EPA would determine the appropriate headworks concentration (i.e., either 1.0 part per million or 25 parts per million).

CMA2 - CMA, WH2P-00033, 28,2 Industry Assn.

EPA Should Update the List of Spent Solvents Eligible for the Headworks Exemption to Include All Solvents Listed in F001 – F005. In addition, EPA should update of the list of solvents eligible for the headworks exemption. After the original headworks exemption, EPA made additions to the solvent listings, but the corresponding list of solvents in the headworks exemption was not modified. 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. Of particular interest in this regard is benzene, which is sometimes present as a minor component or impurity in other materials.

CMA2 - Ohio EPA, WH2P-00030, 2,1 State

Section (l)(E): What Other Regulatory Options Have Been Received From EPA Stakeholders? 1. Request for Comment: Should the headworks exemption (§261.3 (a)(2)(iv)(A) and (B)) be expanded to exempt wastewater mixtures consisting of small quantities of the following F-listed spent solvents: benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane? Comment: Ohio EPA supports the inclusion of benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane in the headworks exemption. The result of the exemption is that the wastewater and wastewater treatment sludge is not listed due to the presence of these spent solvents and the derived-from rule. The facts, circumstances, and reasoning that U.S. EPA used to support finalizing the original exemption, promulgated in 1981, remain valid for these four solvents. 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 (CWA). In 1981, U.S. EPA found that wastewater whose discharge is subject to regulation under CWA Sections 402 and 307(b) are typically treated by biological, physical, or chemical processes capable of reducing spent solvent concentrations in wastewater. The Agency concluded that spent solvent concentrations, in wastewater mixtures, of no more than 1 ppm carcinogenic solvents and no more than 25 ppm non-carcinogenic solvents are reduced by treatment to levels that do not pose a substantial threat to human health and the environment. Also, the low solvent concentration limits established in the rule guard against the indiscriminate disposal of spent solvents by the generator to a wastewater treatment facility, which could jeopardize a generator's ability to comply with its CWA discharge requirements.

CMA2, CMA3 - ETC, WH2P-00034, 3,3 Waste Mgmt. Assn.

The ETC would be interested, however, in EPA's further analysis of an expansion of the current headworks exemption to four chemicals and multi-source leachate from listed wastes, and allowance of direct monitoring of solvent concentrations in wastewater to demonstrate compliance. At this point, it is not clear what the potential environmental impact would be of expanding this exemption to additional chemicals, or the potential impact of ignoring losses due to volatilization from direct monitoring.

CMA2, CMA3 - Maine DEP, WH2P-00029, 2,3 State

Two other proposals from CMA involve exempting specific wastes which are mixtures of solid

waste and hazardous wastes; (1) expansion of the headworks exemption found at 40 CFR 261.3(a)(2)(iv)(A) and (B); and (2) expansion of a current exemption for de minimus losses that result from the manufacture of commercial chemical product. Expansion of the Headworks Exemption: This exemption excludes wastewaters containing small concentrations of F-listed solvents based on mass balance flow of these solvents through the headworks of industrial wastewater treatment systems. CMA proposes to allow direct sampling of the wastewaters to establish a concentration instead of the mass balance approach. CMA further proposes to add four compounds and multi source leachate (F039) to the list of compounds allowed under this exemption. One potential problem with CMA's proposal is it 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. Second, CMA's proposal again addresses whether and how RCRA should be modified in the wastewater treatment context, and this is a matter that could be comprehensively addressed in deliberations following completion of the surface impoundment study.

CMA2 - BP Amoco Chemicals, WH2P-00041, 2,2 Industry
BP Amoco Chemicals supports expansion of the headworks exemption as suggested by CMA. CMA's proposal to demonstrate compliance with the concentration limits of the existing headworks exemption by direct measurement and to update the exemption by including the four solvents EPA added in 1986 is consistent with existing regulations, adds operational flexibility for facilities and makes sense.

CMA2 & CMA7 & CMA8- BP Amoco Chemicals, WH2P-00041, 2,1 Industry
BP Amoco Chemicals supports the derived-from rule revisions suggested by CMA for residues from combustion of listed wastes, leachate from land disposal of listed waste (treated in a Clean Water Act (CWA) permitted system) and sludges from aggressive biological treatment of listed hazardous wastewaters. Residues from combustion and biological treatment processes will have significantly reduced organic constituent concentrations relative to the original waste. EPA should recognize that residues derived from combustion and aggressive biological treatment are fundamentally different (both chemically and physically) from the originally listed wastes and treat these residues as a new point of generation.

CMA2 & CMA7 & CMA8- API, WH2P-00031, 2,4 Industry Assn.
EPA included in the proposal several regulatory options received from the Chemical Manufacturers Association (CMA). 64 Fed. Reg. 63386. API supports exempting from the hazardous waste derived-from rule the following: [1] Residues from the combustion of listed hazardous waste; [2] Leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the Clean Water Act); and [3] Sludges from the biological treatment of listed hazardous wastewaters. API agrees with CMA that these wastes are physically and chemically dissimilar from the wastes that were originally listed. API also agrees with CMA that combustion and biological treatment can greatly reduce or eliminate organic chemicals. For these reasons, it is appropriate to exclude these from regulation as hazardous

wastes.

CMA3

Monitoring of Actual Concentrations of Spent Solvents in Wastewater

CMA2 & CMA3 & CMA5 - Duke Power, WH2P-00022, 6,3 Utility Co./Assn.
[...] In addition, Duke Power supports the CMA recommendations for specific modifications to any re-promulgated mixture rule to expand the headworks exemption in 40 C.F.R. §§ 261.3(a)(2)(iv)(A) and (B). CMA recommends that EPA allow direct monitoring of the actual concentration of spent solvents in untreated wastewater to demonstrate compliance (rather than the currently required weekly mass balance); extend the exemption to the solvents benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane; and extend the exemption to multi-source leachate (F039) derived solely from the disposal of the spent solvents in 40 C.F.R. § 261.31. Duke Power believes that these modifications would provide continuity to the headworks provisions and facilitate documentation of compliance through direct monitoring. Such improvements are necessary to limit the overbreadth of the mixture and derived-from rules, in the event EPA proceeds with re-promulgation.

CMA2 & CMA3 - SOCMA, WH2P-00035, 23,2 Industry Assn.
B. Option To Expand the Current Headworks Exemption As a fourth option, CMA has asked EPA to consider an expansion of the current headworks exemption provision set out in 40 C.F.R. § 261.3(a)(2)(iv)(A) and (B). The so-called headworks provision exempts from the mixture rule wastewaters containing small amounts (either 1 ppm or 25 ppm) of particular F-listed solvents based on the mass balance flow of the solvents into the headworks of a Clean Water Act regulated industrial wastewater treatment system. CMA's option would expand their current exemption in three ways: (1) Allow direct monitoring of the actual concentration of spent solvents in untreated wastewater as a means to demonstrate compliance; (2) Add benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane to the list of chemicals covered by the exemption; and (3) Allow multi-source leachate (F039) derived solely from the disposal of spent solvents to be eligible for the exemption. SOCMA members strongly support this exemption and believe that their operations would particularly benefit from being able to use direct monitoring of the actual concentration of spent solvents in untreated wastewater as a means to demonstrate compliance. In many instances, the difficulty of using the mass-balance approach that is presently required has prevented SOCMA members from relying on the headworks exemption.

CMA2 & CMA3 - DoD, WH2P-00017, 2,2 Federal Govt.
COMMENT lb." Headworks" Expansion Comment. DoD supports the CMA proposal to expand the "headworks" exemptions in 40 CFR 261.3(a)(2)(iv)(A) and (B). Discussion. Expansion of the headworks exemption in 40 CFR 261.3(a)(2)(iv)(A) and (B) to allow direct monitoring of spent solvent concentrations, to include the spent solvents added by EPA in 1986, and to include multi-source leachate derived from the disposal' of these solvents, constitutes a reasonable change to current regulations. The suggested changes would provide accurate data at the point the wastewater enters the treatment system, but would still allow generators who rarely discharge solvents into their wastewater systems to use the current method for verifying compliance with the 1 ppm/25 ppm standards. [...]

CMA3 - General Electric, WH2P-00005, 12,4 Industry

Proposal 4: EPA should allow an alternative analytic mechanism to demonstrate compliance with the headworks exemption (40 C.F.R 261.3(a)(1)(iv) (A) and (B)) and expand the list of solvents included. The 1981 rule that excluded wastewaters containing small quantities of F-listed solvents from RCRA regulation based on the mass-balance flow of the solvents through the headworks of industrial wastewater treatment systems addressed a significant problem and appropriately relied on the underlying regulatory scheme of the Clean Water Act to ensure protection of human health and the environment. The headworks exemption currently calls for solvent concentrations to be shown by dividing the average weekly headworks flow into the maximum weekly solvent usage, excluding solvents that can be shown not to go into the headworks. The mass balance approach to demonstrating compliance gives rise to a number of problems due to the varying degrees of precision in the underlying measurements. GE urges EPA to adopt a revision to this regulation that would allow generators to use direct sampling and analysis methods that are much more straightforward to implement and would provide more accurate information about what is actually being discharged to treatment systems. The difficulty of implementing the mass balance approach is illustrated by one of the GE facilities that uses several million pounds of toluene per year. The amount of toluene purchased is documented by purchase orders, but then it is stored until used. Because it is used at a variety of locations, it is difficult to track the maximum weekly usage as required by the current regulations. In addition, much of the toluene is either taken off in tanker trucks to be disposed of in an incinerator, some is incorporated into the products, and some is recycled. In order to perform the mass balance required by the regulations, which allows these amounts to be subtracted out, each of these uses and destinations must be measured with a high degree of accuracy. The required degree of measurement accuracy is difficult to attain, given that much of the material is handled in bulk, and scales are not always highly precise, and because some of the data would be based upon engineering estimates. Especially in light of the enforcement risks, we have not to date undertaken to rely on these measurements for regulatory purposes. Therefore we have been unable to take advantage of an exemption that would provide significant benefit to GE. By contrast however, we do have the ability to take samples to measure actual levels of toluene and other solvents in the wastewater at the headworks of the treatment plant to determine whether these levels are below the regulatory thresholds. Since flows may be variable, we recommend that compliance with the regulatory levels be measured on a rolling average basis. The treatment plant is an activated sludge biological treatment plant, which is capable of treating these low levels of solvents, and even higher levels, but employing a rolling average basis for compliance would accommodate normal variability in wastewater with the treatment plant's capability to handle these solvents. In the preamble to the proposed HWIR regulation, EPA expressed concern that losses of solvent due to volatilization would not be taken into account if the regulations allowed direct measurements at the headworks. (64 FR 63387). EPA did not directly state that the current measurement scheme needed to account for volatilization when it finalized the headworks exemption, and it is not part of the current regulatory language. However, GE recognizes 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 light of recent air regulations issued by EPA that directly address volatilization (Subpart Kb of the New Source Performance Standards; the Hazardous Organic NESHAP Maximum Achievable Control Technology Regulation; RCRA Subparts AA, BB, and CC; and the forthcoming Subpart YYY of the New

Source Performance Standards) we believe it is unnecessary to address volatilization in the RCRA regulations governing the headworks exemption. These and other air regulations already address such emissions and will adequately protect EPA's concern.

CMA3 - Phillips Petroleum Co., WH2P-00014, 8,2

Industry

Proposal 4: EPA should allow an alternative analytic mechanism to demonstrate compliance with the "headworks exemption" (40 C.F.R 261.3(a)(1)(iv) (A) and (B)) and expand the list of solvents included. The 1981 rule that excluded wastewaters containing small quantities of F-listed solvents from RCRA regulation based on the mass-balance flow of the solvents through the headworks of industrial wastewater treatment systems addressed a significant problem and appropriately relied on the underlying regulatory scheme of the Clean Water Act to ensure protection of human health and the environment. The headworks exemption currently calls for solvent concentrations to be shown by dividing the average weekly headworks flow into the maximum weekly solvent usage, excluding solvents which can be shown not to go into the headworks. Phillips urges EPA to revise this regulation to allow generators to use direct sampling and analysis methods that are much more straightforward to implement and would provide more accurate information about what is actually being discharged to treatment systems.

CMA3 - Occidental Chemical Corp., WH2P-00046, 11,2

Industry

EPA Should Provide an Alternative Analytical Mechanism to Qualify for the 261.3(a)(1)(iv)(A) and (B) "Headworks Exemption." Due to the "mixture rule," wastewaters containing small quantities of certain spent solvents on the "F" list of hazardous wastes of 40 CFR 261.31 are considered listed hazardous wastes. To avoid this result, EPA in 1981 excluded wastewaters containing small quantities of these F-listed solvents, based on the mass-balance flow of these solvents through the headworks of industrial wastewater treatment systems. 40 CFR 261.3(a)(2)(iv)(A)&(B) (the "headworks exemptions"). Wastewater Treatment Systems Can Effectively and Efficiently Manage Dilute Waste Solvents, Such as Those Identified in F001-F005. EPA recognized that such dilute concentrations of specific solvents in wastewater would be adequately treated by conventional wastewater treatment plants, such that there was no need to extend the mixture/derived from rules to spent solvents in such wastewaters. The preamble to the rule recognizes that low levels of such wastes are reasonably and efficiently managed by wastewater treatment systems, and do not pose a substantial hazard to human health or the environment. Accordingly, the Headworks Exemption exempts certain solvent wastes from the RCRA regulatory scheme so long as the solvent concentrations are below certain levels and the wastewater is subject to section 307(b) or 402 of the Clean Water Act (pretreatment and NPDES provisions). Because wastewater treatment systems are effective in treating low levels of solvents and do not pose a substantial threat to human health or the environment, the permitting and regulatory authorities under the Clean Water Act are appropriate to address these low levels of solvents. See 46 Fed. Reg. 56,582, 56,584 (November 17, 1981). EPA should amend 40 CFR 261.3(a)(2)(iv)(A) and (B) to allow monitoring of the actual concentration of spent solvents in untreated wastewater, i.e., via sampling and analysis, as an acceptable alternative to demonstrating compliance with these provisions. The "Mass Balance" Approach to Qualifying for the Headworks Exemption is Unworkable for Some Operations. The "headworks exemption"

currently calls for the solvent concentrations to be shown by dividing the average weekly headworks flow into the maximum weekly solvent usage, excluding solvents which can be shown not to go into the headworks. This mass balance approach can be difficult due to the varying degrees of precision in the underlying measurements. For example, the ranges of error in calculating solvent losses and wastewater flows may be bigger than necessary to confirm that the solvent concentrations are below the required levels. This problem could be solved by allowing direct sampling of the wastewater as an alternative means of determining solvent concentrations. The regulatory language adopted in 1981, however, does not allow generators to demonstrate compliance with these provisions by monitoring the actual concentration of spent solvents in untreated wastewater. Thus, facilities cannot rely on sampling and analysis to avail themselves of the exclusion; they can only employ the exclusion by relying on calculations of solvent consumption and flow rate into the headworks.

CMA3 - NY Dept. of Env. Conservation, WH2P-00048, 5,2 State

As for the headworks exemption itself, it never made any sense to require that compliance be determined by calculation, with the inclusion of fugitive emission losses. If it is appropriate to allow small amounts of solvent to be treated together with wastewater in a wastewater treatment system, fugitive emissions should not enter into the calculations at all. Rather, emissions should be regulated separately, under the Clean Air Act. The headworks concentration should be measured directly through sampling. To attempt to measure concentrations by any kind of mass balance, particularly if fugitive emissions must be included, makes the current exemption difficult to implement and, therefore, of virtually no practical value.

CMA3 - CMA, WH2P-00033, 25,1

Industry Assn.

EPA Should Provide an Alternative Analytical Mechanism to Qualify for the 261.3(a)(1)(iv)(A) and (B) Headworks Exemption. The current headworks exemption 1 allows low concentrations of F-listed spent solvent wastes to be managed in a wastewater treatment system if the system's discharge is subject to a Clean Water Act permit. However, EPA's prescribed mass balance methodology for demonstrating low concentrations of spent solvents is impracticable and unnecessarily deters use of this exemption. CMA recommends that EPA amend the exemption to allow a facility to demonstrate compliance through monitoring of the actual concentration of spent solvents in untreated wastewater. CMA believes this recommendation is consistent with the analysis that justified the original exemption and is a more direct way of assuring that only low concentrations of these listed solvent wastes are managed in this way. We also believe that adoption of this recommendation will make the exemption more easily accessible to a variety of operations that generate dilute solvent streams but which, for operational or economic reasons, cannot reliably use the current mass-balance approach for demonstrating compliance. Finally, we believe, based on the Agency's experience with efficient and effective wastewater treatment and the growing body of RCRA and Clean Air Act regulations governing volatile emissions, that EPA can promulgate this amendment to the headworks exemption as part of the April 30, 2001 final rule. a. Wastewater Treatment Systems Can Effectively and Efficiently Manage Dilute Waste Solvents, Such as Those Identified in F001-F005. In the preamble to the original headworks exemption 2 EPA recognized that low levels of spent solvent wastes could be reasonably and

efficiently managed by conventional wastewater treatment systems, without posing a risk to human health or the environment. As a result, EPA concluded that there was no need to extend the mixture/derived from rules to low concentrations of spent solvents in such wastewaters. Accordingly, the Agency promulgated the headworks exemption which exempts certain solvent wastes from the RCRA regulatory scheme so long as the solvent concentrations are below prescribed levels and the wastewater is subject to permit under the Clean Water Act. Because wastewater treatment systems are effective in treating low levels of solvents and ensuring that these low concentrations do not pose a substantial threat to human health or the environment, the permitting and regulatory authorities under the Clean Water Act were deemed appropriate to address these low levels of solvents. Nothing in CMA's recommendation would change the concentration of F-listed spent solvents that could permissibly be managed in such wastewater treatment systems. EPA's conclusions supporting the exemption in 1981 are even stronger today in light of the additional requirements on wastewater treatment (e.g. additional effluent guidelines, water quality-based standards, and biomonitoring requirements) imposed since 1981. 1. 40 C.F.R. 261.3(a)(2)(iv)(A) and (B) 2. See 46 Fed. Reg. 56,582, 56,584 (November 17, 1981).

CMA3 - Ohio EPA, WH2P-00030, 2,3 State

2. Request for Comment: Should the headworks exemption (§ 261.3(a)(2)(iv)(A) and (B)) be revised to allow the direct monitoring (i.e. sampling and analysis) of spent solvent concentrations of wastewater mixtures at the headworks of the facility's wastewater treatment or pretreatment system to demonstrate compliance with the concentration limits (1 ppm and 25 ppm) of the headworks exemption? Comment: Ohio EPA supports the option of allowing generators to use direct monitoring of solvent concentrations in untreated wastewater at the headworks of the wastewater treatment system to determine compliance with this exemption. Direct monitoring, such as representative sampling and laboratory analysis, provides the most definitive information as to the concentration levels of hazardous constituents in a waste. Direct monitoring technology is widely available to generators. Furthermore, direct monitoring will allow the generator to apply the exemption to its full regulatory extent. In the preamble to the original rule (Federal Register, Vol. 46, No. 221, page 56582, November 17, 1981), U. S. EPA did not explicitly explain why the calculation method was chosen to determine spent solvent concentrations in wastewater. However, the preamble discussion does lead one to conclude that the cost and availability of direct monitoring at the time was the reason as to why the calculation method was adopted. Since that time, the use of sophisticated procedures and technology is more readily available to generators, more common place, and less costly. Therefore, if direct monitoring was not originally adopted because of prohibitive cost and availability, these factors are not prevalent now. Also, when this exemption was promulgated, U.S. EPA researched the capability of wastewater treatment systems to treat spent solvents. You found that wastewater treatment systems subject to CWA Sections 402 and 307 (b) typically use physical, chemical and biological treatment processes designed to degrade organic materials. And, that these systems are capable of treating spent solvents; especially at the low concentration limits set in the exemption. Therefore, you concluded, that it is appropriate and practicable for these systems to treat wastewater containing low concentrations (1 ppm and 25 ppm) of spent solvents. However, due to the use of the calculation method (a mass balance calculation which includes solvents that have volatilized prior to entering the headworks), generators have not been able to apply the exemption to its regulatory limit. The direct monitoring

of headwork wastewater will allow generators to apply the exemption to its full intended regulatory limit.

CMA3 - Occidental Chemical Corp., WH2P-00046, 12,4 Industry
CMA's Recommendation Would Not Encourage Facilities to Volatize Solvents Prior to the Headworks of the Wastewater Treatment System. EPA's proposed HWIR preamble notes that CMA's recommended alternative method would provide more accurate data at the point where the wastewater enters the treatment system, but would not account for losses due to volatilization. 64 FR 63387. Initially, it may be noted that the current version of the rule does not directly account for losses due to volatilization, so EPA's concern is not formally part of the existing regulation. However, in the 1981 preamble, and in subsequent letters, EPA has stated that losses due to volatilization may not be discounted under the mass balance approach of the current version of the exemption. (See June 10, 1989 letter from Don Clay to Jacqueline Shafer (probably really 1991) (faxback 11614); 9441.1991(08). Although the preamble does not give a reason for requiring volatilization losses to be included, the 1989 Clay letter explains that it was designed "to prevent facilities from qualifying for the exemption by volatilizing their solvents, and thus causing negative environmental impacts." In the years subsequent to the Clay letter's statement of concern over volatilization, EPA has issued a number a 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. This is especially true since the purpose of the headworks exemption "was to keep large volumes of treatment sludges from falling within the scope of the listings(s) when, in fact the wastewater treatment system could handle the amount of solvents contained in the wastestream as it entered the headworks of the treatment system." (6/10/89 Clay Letter). The air regulations issued by EPA which 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. In each of these regulations, EPA has done a considered analysis of what levels of emissions require controls. These air program regulatory processes are the 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 unnecessarily included in the hazardous waste definition. Demonstration of Compliance with CMA's Alternative Should be Based on a Sampling and Analysis Plan Consistent with SW-846.

CMA3 - CMA, WH2P-00033, 26,1 Industry Assn.
CMA's Recommendation Would Not Encourage Volatilization of Solvents Prior to the Headworks of the Wastewater Treatment System. EPA's proposed HWIR preamble notes that CMA's recommended alternative method would provide more accurate data at the point where the

wastewater enters the treatment system, but would not account for losses due to volatilization.¹ Initially, it may be noted that the current version of the rule does not directly account for losses due to volatilization, so EPA's concern is not formally part of the existing regulation. However, in the 1981 preamble, and in subsequent letters, EPA has stated that losses due to volatilization may not be discounted under the mass balance approach of the current version of the exemption.² Although the preamble does not give a reason for requiring volatilization losses to be included, the 1989 Clay letter explains that it was designed to prevent facilities from qualifying for the exemption by volatilizing their solvents, and thus causing negative environmental impacts. In the years subsequent to the Clay letter's statement of concern over volatilization, EPA has issued a number of regulations addressing air emissions of organics, including the F-listed solvents. Because EPA has addressed these potential air emissions by regulations that focus specifically on those emissions, there is less environmental need for the headworks exemption to have to account for them as well. This is especially true since the purpose of the headworks exemption was to keep large volumes of treatment sludges from falling within the scope of the listings(s) when, in fact the wastewater treatment system could handle the amount of solvents contained in the wastestream as it entered the headworks of the treatment system.³ The following regulations issued under both RCRA and the Clean Air Act address the volatilization of solvents: 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. In each of these regulations, EPA has done a considered analysis of what levels of emissions require controls. These air emission limitations represent EPA's more focused judgement on how to regulate volatile emissions from wastewaters and relying on them is consistent with RCRA's mandate to that the Administrator integrate RCRA with other laws environmental laws.⁴ EPA should remain true to the original intent of the headworks exemption -- to prevent wastewater and sludges from being unnecessarily included in the hazardous waste definition -- by duplicating protections and controls rightfully developed under the Clean Air Act. 1. 64 Fed. Reg. 63387 2. See June 10, 1991 letter from Don Clay, EPA to Jacqueline E. Schafer, Department of the Navy (faxback 11614) 3. Ibid 4. RCRA § 1006(b)

CMA3 - CMA, WH2P-00033, 27,2

Industry Assn.

A Direct Monitoring Alternative Would Make the Headworks Exemption Rightfully Available to a Greater Number of Facilities. The headworks exemption currently requires a facility to calculate solvent concentrations by dividing the average weekly headworks flow into the maximum weekly solvent usage, excluding solvents which can be shown not to go into the headworks. This mass balance approach can be difficult, and expensive to implement, in part due to the varying degrees of precision in the underlying measurements. For example, the ranges of error in calculating solvent losses and wastewater flows may be bigger than necessary to confirm that the solvent concentrations are below the required levels. This methodology is particularly problematic for large or complex facilities that would have to the flow and usage of multiple solvents through multiple processes prior to the headworks of the centralized wastewater treatment system. The

methodology problem could be solved, and more facilities could rightfully claim the exemption, by allowing direct sampling of the wastewater as an alternative means of determining solvent concentrations. Facilities are familiar with requirements to sample and analysis. Monitoring requirements to implement this alternative should be consistent with SW-846 and could be part of the facility's waste analysis plan.

CMA2, CMA3 - Maine DEP, WH2P-00029, 2,3 State

Two other proposals from CMA involve exempting specific wastes which are mixtures of solid waste and hazardous wastes; (1) expansion of the headworks exemption found at 40 CFR 261.3(a)(2)(iv)(A) and (B); and (2) expansion of a current exemption for de minimus losses that result from the manufacture of commercial chemical product. Expansion of the Headworks Exemption: This exemption excludes wastewaters containing small concentrations of F-listed solvents based on mass balance flow of these solvents through the headworks of industrial wastewater treatment systems. CMA proposes to allow direct sampling of the wastewaters to establish a concentration instead of the mass balance approach. CMA further proposes to add four compounds and multi source leachate (F039) to the list of compounds allowed under this exemption. One potential problem with CMA's proposal is it 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. Second, CMA's proposal again addresses whether and how RCRA should be modified in the wastewater treatment context, and this is a matter that could be comprehensively addressed in deliberations following completion of the surface impoundment study.

CMA2, CMA3 - ETC, WH2P-00034, 3,3 Waste Mgmt. Assn.

The ETC would be interested, however, in EPA's further analysis of an expansion of the current headworks exemption to four chemicals and multi-source leachate from listed wastes, and allowance of direct monitoring of solvent concentrations in wastewater to demonstrate compliance. At this point, it is not clear what the potential environmental impact would be of expanding this exemption to additional chemicals, or the potential impact of ignoring losses due to volatilization from direct monitoring.

CMA4
Definition of Headworks

CMA4 - DOE, WH2P-00007, 4,2

Federal Govt.

p. 63387, cols. 1 & 2 – EPA explains that, among other things, the CMA proposal includes an option that would expand the current headworks exemption in 40 CFR 261.3(a)(2)(iv)(A) and (B). The headworks exemption exempts from the mixture rule wastewaters containing small quantities of particular F-listed solvents, based on the mass-balance flow of these solvents through the headworks of industrial wastewater treatment systems. If EPA decides to adopt this option proposed by the CMA, or modify this particular regulatory provision, DOE recommends incorporating a clear definition of headworks for the purpose of claiming the exemption. For example, a possible definition of headworks would be the calculated average of all influents flowing into the first aggregation point (treatment unit) of the treatment system.

CMA5

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

CMA2 & CMA3 & CMA5 - Duke Power, WH2P-00022, 6,3 Utility Co./Assn.

[...] In addition, Duke Power supports the CMA recommendations for specific modifications to any re-promulgated mixture rule to expand the headworks exemption in 40 C.F.R. §§ 261.3(a)(2)(iv)(A) and (B) CMA recommends that EPA allow direct monitoring of the actual concentration of spent solvents in untreated wastewater to demonstrate compliance (rather than the currently required weekly mass balance); extend the exemption to the solvents benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane; and extend the exemption to multi-source leachate (F039) derived solely from the disposal of the spent solvents in 40 C.F.R. § 261.31. Duke Power believes that these modifications would provide continuity to the headworks provisions and facilitate documentation of compliance through direct monitoring. Such improvements are necessary to limit the overbreadth of the mixture and derived-from rules, in the event EPA proceeds with re-promulgation.

CMA5 - DoD, WH2P-00017, 2,2 Federal Govt.

[...] In addition, these changes would add flexibility to the current treatment options for facilities conducting remediation at land disposal sites with contaminated leachate. In many cases, leachate is contaminated with barely detectable concentrations of F-listed solvents, yet the leachate is still classified as hazardous waste under the mixture and derived-from rules. By allowing the wastewater to be discharged for treatment to a wastewater treatment or pre-treatment system regulated under the Clean Water Act, EPA would encourage remediation by lowering treatment costs. 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 also be adequately protective. [...]

CMA5 - NY Dept. of Env. Conservation, WH2P-00048, 5,4 State

This Department would not support the inclusion of multi-source leachate, even though the leachate might be derived from the disposal of no other listed hazardous waste than the indicated solvents. The leachate might contain any variety of hazardous constituents, due to the presence of characteristic wastes or non-hazardous wastes. In short, it would be difficult to determine whether the headworks exemption, if modified in this manner, would be sufficiently protective of human health and the environment. If the discharge is regulated under the CWA, this may provide a reasonable amount of assurance with respect to exposure paths, relating to the wastewater discharge. However, many hazardous constituents present in the leachate may end up in sludges.

CMA5 - General Electric Corp., WH2P-00005, 14,2 Industry

Finally, the scope of the headworks exemption needs to be expanded to address two recent regulatory developments. First, the identification of multisource leachate as F039 has had what GE believes to have been an unintended effect on the headworks exemption. Since the advent of the

F039 listing, leachate that is listed as F039 solely because it was derived from F001- F005 solvent wastes can no longer be treated in the industrial wastewater treatment systems and accounted for as part of the headworks exemption. Only F001 -F005 solvents are eligible for the exemption. Therefore, even though F039 listed solely due to F001-F005 wastes are similar 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. We believe that this was an unintended effect of the F039 listing and that EPA could and should issue a technical correction or clarification notice with or before promulgating the final HWIR rule to address this problem.

CMA5 - Phillips Petroleum Co., WH2P-00014, 9,1 Industry

Finally, the scope of the headworks exemption needs to be expanded to address recent regulatory developments. The identification of multisource leachate as F039 has had what Phillips believes to have been an unintended effect on the headworks exemption. Since the advent of the F039 listing, leachate that was derived solely from F001-F005 solvent wastes can no longer be treated in the industrial wastewater treatment systems and accounted for as part of the headworks exemption. Only F001-F005 solvents are eligible for the exemption. 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. We believe that this was an unintended effect of the F039 listing and that EPA could and should issue a technical correction or clarification notice with or before promulgating the final HWIR rule to address this problem.

CMA5 - Occidental Chemical Corp., WH2P-00046, 13,4 Industry

Exemption Would Apply to Leachate Generated Solely from Disposal of F001 - F005. The advent of F039 multi-source leachate simplified some hazardous waste management by applying the single listing code to hazardous waste leachate rather than requiring that codes for each waste generating the leachate would have to be tracked with the leachate. The "streamlining" resulting from the promulgation of F039, however, 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. Landfill leachate (F039) based on solvent listings should be eligible for the headworks exemption. To qualify, the leachate would have to be from the disposal of F- listed solvent wastes, and no other listed wastes. In this way, 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 equally well treated in the wastewater treatment plant at these low concentrations, so there is no justification for regulating them differently. OxyChem and OVLP believe that adoption of this addition to the headworks exemption will make the exemption more easily accessible to a variety of operations that generate dilute solvent streams but which, for other operational reasons, cannot reliably use the current mass-balance approach. We, based on the Agency's long-term

experience with efficient and effective wastewater treatment and the protectiveness provided by a variety of regulations promulgated under RCRA and the Clean Air Act to address volatile emissions, EPA can promulgate an amendment to the headworks exemption as part of the final HWIR rule.

CMA5 - CMA, WH2P-00033, 27,4

Industry Assn.

Exemption Should Apply to Leachate Generated Solely from Disposal of F001 – F005. The advent of F039 multi-source leachate simplified some hazardous waste management by applying the single listing code to hazardous waste leachate rather than requiring that codes for each waste generating the leachate be tracked in the leachate. The streamlining resulting from the promulgation of F039, however, did create some unintended consequences. Leachate generated solely from F001-F005 no longer qualified for the headworks exemption, since it only applies to wastes carrying the F001-F005 codes and not F039, even though the composition of the leachate was virtually identical to dilute non-leachate F001-F005 streams. Landfill leachate (F039) based on F001-F005 solvent listings should be eligible for the headworks exemption. To qualify, the leachate would have to be solely from the disposal of F- listed solvent wastes, and no other listed wastes. In this way, 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 equally well treated in the wastewater treatment plant at these low concentrations, so there is no justification for regulating them differently.

CMA6

General Comments on Exempting Treated Leachate from Landfills and Land Treatment Units

CMA6 & CMA7 & CMA8 - Ohio EPA, WH2P-00030, 4,3 State

Request for Comment: Should the following three wastes be exempt from the derived-from rule?

1. Residues from the combustion of listed hazardous wastes. 2. Leachate, from the land disposal of a listed hazardous waste that is subsequently managed in a wastewater treatment system regulated under CWA. 3. Sludges generated from the biological treatment of listed hazardous wastewater.

Comment: Ohio EPA thinks that there may be merit in exempting the above treatment residues from the derived-from rule. However, to make a definitive decision, we 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 three residues in question are generated either from bonafide treatment methods proven to detoxify or otherwise treat hazardous waste, or from the disposal of hazardous waste. The residues are physically and/or chemically different from the hazardous wastes they were generated from. Therefore, we believe it is appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibits a hazardous waste characteristic. Furthermore, the derived-from and mixture rules were developed by U. S. EPA to close a regulatory loophole and to ensure that hazardous wastes are treated by a bonafide treatment method that reduces, detoxifies, or immobilizes hazardous constituents. Treatment means the hazardous constituent or characteristic of the waste has been reduced, detoxified, immobilized or otherwise treated to minimize the threat to human health and the environment when disposed. Combustion and biological treatment are bonafide hazardous waste treatment methods as evident through their use in the LDR program. Also, leachate is generated from landfills where only treated hazardous wastes are disposed. Since bonafide treatment occurs or has occurred in these scenarios applying the derived-from rule to the residues is not appropriate. This is because the purpose for which the derived-from and mixture rules were developed (i.e. to ensure proper treatment of a listed hazardous waste) has been attained for the original listed hazardous waste. Therefore, we find it reasonable to consider the residues newly generated wastes and subject to RCRA regulation if they exhibit a hazardous waste characteristic. Also, if these residues merit listing in accordance with §261.11 then they should be listed through that process.

CMA6 & CMA7 - ETC, WH2P-00034, 3,2 Waste Mgmt. Assn.

For similar reasons, the ETC cannot support the alternative option of exempting leachate from land disposal of listed hazardous wastes, or the option of exempting sludges from biological treatment of listed hazardous wastes. Leachate already has a multi-source listing code (F039) and tailored LDR treatment standards. Moreover, tanks for treatment of leachate that are part of a Clean Water Act system are already conditionally exempt. Thus, it is not clear why a more expansive exemption is advisable, particularly because leachate from hazardous wastes may often contain toxic constituents that are not subject to NPDES discharge limits or water quality standards. Likewise, sludges from biological treatment of listed hazardous wastes 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.

CMA6 - Maine DEP, WH2P-00029, 2,1 State

Leachate from Land Disposed Listed Wastes: This exemption would exempt non-characteristic leachate from land disposal units when it is managed in a waste water treatment system with discharges subject to Clean Water Act regulation. All of the above comments relating to whether EPA ever intended the characteristic to be a safe level and the lack of comprehensiveness of the TC apply for these waste streams as well. In addition, many organics of concern are also not covered by the TC. 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. 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 way to generically 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 could also be an air emission problem or the leachate could cause the sludge to become hazardous. If there are sites where a company believes that relief is warranted, they should go through a site specific delisting for these units.

CMA6 - General Electric, WH2P-00005, 11,2 Industry

Proposal 3: EPA should consider leachate from hazardous waste landfills that is treated in a permitted wastewater treatment system to be a newly generated waste or make it eligible for the headworks exemption. 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. EPA has designated leachate from hazardous waste landfills and land treatment units as F039 because the Agency recognized the dramatic differences in the physical and chemical makeup of multisource leachate from the original hazardous wastes from which they are derived. But because the leachate remains a listed waste, options for managing it are limited in ways that serve no purpose. Under the terms of most permits, hazardous waste leachate cannot be discharged directly to a sewer where it would cease being a solid waste so long as the leachate mixed with domestic sewage from off-site sources before reaching the publicly owned treatment works (POTW). Further, even if the leachate meets all applicable effluent guidelines and other standards, most POTWs will simply refuse to accept a direct discharge of hazardous waste. Consequently when the leachate is treated in on-site wastewater treatment facilities, the treated wastewaters and the sludges fall under all the same constraints that are discussed above under the heading of wastewaters and sludges from aggressive biological treatment units. In compliance with the agency's mandate under Section 1006 of RCRA to coordinate hazardous waste regulation with regulation under other federal statutes, these problems could be solved by deregulating F039 wastewaters so long as they are treated in a wastewater treatment plant permitted under the Clean Water Act and do not exhibit a characteristic. To illustrate the application of the proposed exemption for leachate which is treated by a permitted wastewater treatment plant, we offer two examples from GE facilities, both with leachate from onsite landfills, and both with biological wastewater systems capable of treating the leachate. In the first case, Site A, the leachate contains levels of solvents and other contaminants which are very low, can be handled by a biological system with the resulting effluent fully in compliance with the system's permits, and would pose no significant risk to human health

or the environment. Nevertheless, to avoid the regulatory burdens and sludge disposal costs associated with the derived from rule, Site A does not treat this leachate in its own biological system only a few hundred yard away, but instead ships it several hundred miles by tanker truck to an offsite RCRA disposal facility. In the second case, Site B has leachate with low levels of contaminants, which in this case are treated by the onsite activated sludge biological treatment plant. The plant treats other hazardous wastewater streams, and the resulting sludge must be handled as hazardous waste under the current mixture and derived from rules. GE has sampled the sludge from these operations under its Waste Analysis Plan for many years, and the results from the last three years are presented in Attachment 1. A broader suite of parameters was the subject of a recent analysis, and those results are presented in Attachment 2. These data confirm the efficiency of treatment provided by wastewater treatment systems, and EPA should amend the mixture and derived from rules to exempt leachate wastewaters treated in such systems. To remedy these problems, EPA could either establish a new point of generation for multi-source leachate that is treated in a permitted wastewater treatment system or could expand the headworks exemption to allow the inclusion of multisource leachate in non-hazardous industrial wastewater treatment systems and rely on the CWA controls to prevent environmental harm.

CMA6 - Phillips Petroleum Co., WH2P-00014, 7,2 Industry
Proposal 3: EPA should consider leachate from hazardous waste landfills to be a newly generated waste or make it eligible for the headworks exemption. 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. EPA has designated leachate from hazardous waste landfills and land treatment units as F039 because EPA recognized the dramatic differences in the physical and chemical makeup of multisource leachate from the original hazardous wastes from which they are derived. Because the leachate remains a listed waste, options for managing it are limited in ways that serve no purpose. Even if the leachate meets all applicable effluent guidelines and other standards, most POTWs will simply refuse to accept a direct discharge of "hazardous waste". Consequently when the leachate is treated in on-site wastewater treatment facilities, the treated wastewaters and the sludges fall under all the same constraints that are discussed above under the heading of wastewaters and sludge from aggressive biological treatment units. At one of its facilities, Phillips is precluded from managing multisource leachate (F039) in its NPDES industrial wastewater treatment system solely because of mixture and derived-from implications. The leachate at its point of generation meets all applicable LDR standards most at non-detectable concentrations. Instead Phillips continues to operate RCRA permitted hazardous waste impoundments solely for the management of this leachate. To remedy this problem, EPA should expand the headworks exemption to allow the inclusion of multisource leachate in CWA regulated wastewater treatment systems and rely on the CWA controls to prevent environmental harm.

CMA6 - Occidental Chemical Corp., WH2P-00046, 16,3 Industry
EPA Should Establish a New Point of Generation for Multi-Source Leachate. EPA could amend 40 CFR 261.3(c)(2)(ii) to establish a new point of generation for leachates derived from landfills or land treatment units managing listed hazardous waste, so long as the leachate does not exhibit a

hazardous characteristic and is managed in a wastewater treatment system that is permitted under the Clean Water Act. This new-point-of-generation approach has been part of the Land Disposal Restriction program for characteristic wastes for many years. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990). In the LDR program, EPA recognized that various treatment residuals differ from the listed wastes from which they are derived, as demonstrated by a change in treatability group, and thus should not continue to be considered a newly generated waste. The Exemption Would Apply to Leachate from Landfills and Land Treatment Units with Leachate Collection Systems. 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 Clean Water Act. Allowing Treatment On-Site Would Reduce Environmental Burden and Incremental Waste Management Costs. The transfer of leachate off-site, whether to a POTW, a deep well, an incinerator, or to other treatment, results in an increase in incremental cost and environmental burden that is unnecessary when the leachate could be managed protectively in the facility's on-site wastewater treatment system. This is particularly true for leachates that are generated from listed waste that are removed from the WWTS into which the leachate could be returned. There may be other ways to integrate the RCRA and Clean Water Act programs. The Office of Water is currently pursuing the promulgation of effluent guidelines for landfills. However, since the CWA rulemaking is still in process, and it is unknown whether the final version will alleviate the problem described, we urge EPA to adopt a RCRA solution, such as proposed above, in the final rule.

CMA6 - CMA, WH2P-00033, 33,1

Industry Assn.

Leachate from Landfills Managing Listed Hazardous Wastes Should be Considered a New Point of Generation. Leachate from landfills managing listed hazardous waste can frequently be treated and discharged by a wastewater treatment system whose discharge is regulated under the Clean Water Act. However, due to the "derived-from rule," leachate from such landfills or from land treatment units carries the F039 multi-source leachate listing and must be managed as a listed hazardous waste. These leachates, however, differ dramatically in their physical and chemical makeup from the original listed hazardous wastes from which they are derived. These "derived-from" leachates may be subjected to costly and unnecessary incineration or other treatment at off-site facilities. In addition, the transportation and management from sending the wastes off-site may actually increase environmental risks and energy usage relative to the protective and cost-effective management in industrial wastewater systems, in which such leachates are clearly amenable to treatment. Congress has taken the position that regulation under the CWA should not be duplicated and in some cases not be pre-empted by RCRA, as exemplified by RCRA's mandate to integrate and avoid duplicative environmental regulation, the domestic sewage exclusion, and the Land Disposal Program Flexibility Act. 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. We know the Agency will meet these integration challenges in the future, such as in response to the Office of Water's efforts to develop effluent guidelines for landfills. The final promulgation of such a rule may well address some of the problems with leachate. However, since the CWA rulemaking is still in process, and it is unknown whether the final version will alleviate the problem described, we urge EPA to adopt a RCRA solution, such

as proposed above, in the April 30, 2001 final rule. a. EPA Should Establish a New Point of Generation for Multi-Source Leachate. EPA should amend 40 C.F.R. 261.3(c)(2)(ii) to establish a new point of generation for leachates derived from landfills or land treatment units managing listed hazardous waste, so long as the leachate does not exhibit a hazardous characteristic and is managed in a wastewater treatment system that is permitted under the Clean Water Act. This new-point-of-generation approach has been part of the Land Disposal Restriction program for characteristic wastes for many years.¹ In the LDR program, EPA recognized that various treatment residuals differ from the listed wastes from which they are derived, as demonstrated by a change in treatability group, and thus should not continue to be considered a newly generated waste. b. EPA Erroneously Assumes All Leachate Can Be Discharged to POTWs or Directly Discharged to Surface Waters. EPA has maintained that management of listed leachate should not be a burden: "... in many, indeed most circumstances, active management of leachate would be exempt from subtitle regulation because the usual pattern management is discharge either to POTWs via the sewer system, where leachate mixes with domestic sewage and is excluded from RCRA jurisdiction (see RCRA Section 1004(27) and 40 C.F.R. 261.4(a)(1)), or to navigable waters, also excluded from RCRA jurisdiction (see RCRA Section 1004(27) and 40 C.F.R. 261.4(a)(2))." (p. 46515) Based on the experience of others in the petroleum and petrochemical industry, we seriously question 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. 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 under the mixture rule it would require its management in a Subtitle C regulated unit. c. The Exemption Would Apply to Leachate from Landfills and Land Treatment Units with Leachate Collection Systems. Both landfills and land treatment facility, as defined by RCRA,² can generate a leachate that is collected. Leachate from either type of unit should qualify for the exemption so long as it did not fail for a hazardous characteristic and the discharge from the wastewater treatment system receiving the leachate was permitted under the Clean Water Act. d. Allowing Treatment On-Site Would Reduce Environmental Burden and Incremental Waste Management Costs. The transfer of leachate off-site, whether to a POTW, a deep well, an incinerator, or to other treatment, results in an increase in incremental cost and environmental burden that is unnecessary when the leachate could be managed protectively in the facility's on-site wastewater treatment system. This is particularly true for leachates that are generated from listed waste that are removed from the WWTS into which the leachate could be returned. e. Establishing a New Point of Generation Would Resolve EPA's Dilemma Over Treatment of Leachate from Wastes Which Were Not Hazardous at Disposal. In the days immediately preceding promulgation of the petroleum refining waste listing rule,³ EPA began struggling with the question of how to treat leachate from the land disposal of listed hazardous waste that was not hazardous (had not been listed) when the waste was placed in the unit. EPA has consistently deferred listing leachate as part of the recently proposed dyes and pigment's⁴ and chlorinated aliphatics⁵ proposals. Establishing leachate as a new point of generation would resolve this problem. It would also remain protective of human health and the environment since the leachate would be evaluated against hazardous characteristics and, if it exhibited one or more, would be managed as a hazardous waste just as any other

characteristically hazardous waste would. The waste would be subject to LDRs for characteristically hazardous waste – removal of the characteristic and treatment to Universal Treatment Standards.⁶
1. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990). 2. 40 CFR § 260.10 3. 63 Fed. Reg. 42,111 (August 6, 1998) 4. 64 Fed. Reg. 40,192 (July 23, 1999) 5. 64 Fed. Reg. 46,477 (August 25, 1999) 6. 40 C.F.R. 268.48

CMA6 - CA Dept. of Toxic Substances Control, WH2P-00009, 2,3 State

We do not quite understand CMA's second proposal 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 Clean Water Act). 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 which case the wastewater would not be a solid waste. Is CMA proposing that F039 be exempt from LDR requirements? If so, DTSC would not support such a recommendation.

CMA7

General Comments on Exempting Aggressive Biological Treatment Residues

CMA6 & CMA7 & CMA8 - Ohio EPA, WH2P-00030, 4,3 State

Request for Comment: Should the following three wastes be exempt from the derived-from rule?

1. Residues from the combustion of listed hazardous wastes. 2. Leachate, from the land disposal of a listed hazardous waste that is subsequently managed in a wastewater treatment system regulated under CWA. 3. Sludges generated from the biological treatment of listed hazardous wastewater.

Comment: Ohio EPA thinks that there may be merit in exempting the above treatment residues from the derived-from rule. However, to make a definitive decision, we 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 three residues in question are generated either from bonafide treatment methods proven to detoxify or otherwise treat hazardous waste, or from the disposal of hazardous waste. The residues are physically and/or chemically different from the hazardous wastes they were generated from. Therefore, we believe it is appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibits a hazardous waste characteristic. Furthermore, the derived-from and mixture rules were developed by U. S. EPA to close a regulatory loophole and to ensure that hazardous wastes are treated by a bonafide treatment method that reduces, detoxifies, or immobilizes hazardous constituents. Treatment means the hazardous constituent or characteristic of the waste has been reduced, detoxified, immobilized or otherwise treated to minimize the threat to human health and the environment when disposed. Combustion and biological treatment are bonafide hazardous waste treatment methods as evident through their use in the LDR program. Also, leachate is generated from landfills where only treated hazardous wastes are disposed. Since bonafide treatment occurs or has occurred in these scenarios applying the derived-from rule to the residues is not appropriate. This is because the purpose for which the derived-from and mixture rules were developed (i.e. to ensure proper treatment of a listed hazardous waste) has been attained for the original listed hazardous waste. Therefore, we find it reasonable to consider the residues newly generated wastes and subject to RCRA regulation if they exhibit a hazardous waste characteristic. Also, if these residues merit listing in accordance with §261.11 then they should be listed through that process.

CMA6 & CMA7 - ETC, WH2P-00034, 3,2 Waste Mgmt. Assn.

For similar reasons, the ETC cannot support the alternative option of exempting leachate from land disposal of listed hazardous wastes, or the option of exempting sludges from biological treatment of listed hazardous wastes. Leachate already has a multi-source listing code (F039) and tailored LDR treatment standards. Moreover, tanks for treatment of leachate that are part of a Clean Water Act system are already conditionally exempt. Thus, it is not clear why a more expansive exemption is advisable, particularly because leachate from hazardous wastes may often contain toxic constituents that are not subject to NPDES discharge limits or water quality standards. Likewise, sludges from biological treatment of listed hazardous wastes 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.

CMA2 & CMA7 & CMA8- BP Amoco Chemicals, WH2P-00041, 2,1 Industry

BP Amoco Chemicals supports the derived-from rule revisions suggested by CMA for residues from combustion of listed wastes, leachate from land disposal of listed waste (treated in a Clean Water Act (CWA) permitted system) and sludges from aggressive biological treatment of listed hazardous wastewaters. Residues from combustion and biological treatment processes will have significantly reduced organic constituent concentrations relative to the original waste. EPA should recognize that residues derived from combustion and aggressive biological treatment are fundamentally different (both chemically and physically) from the originally listed wastes and treat these residues as a new point of generation.

CMA2 & CMA7 & CMA8- API, WH2P-00031, 2,4 Industry Assn.

EPA included in the proposal several regulatory options received from the Chemical Manufacturers Association (CMA). 64 Fed. Reg. 63386. API supports exempting from the hazardous waste derived-from rule the following: [1] Residues from the combustion of listed hazardous waste; [2] Leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the Clean Water Act); and [3] Sludges from the biological treatment of listed hazardous wastewaters. API agrees with CMA that these wastes are physically and chemically dissimilar from the wastes that were originally listed. API also agrees with CMA that combustion and biological treatment can greatly reduce or eliminate organic chemicals. For these reasons, it is appropriate to exclude these from regulation as hazardous wastes.

CMA7 - General Electric Corp., WH2P-00005, 5,2 Industry

Proposal 1: EPA should amend 40 CFR 261.3(C)(2)(ii) to establish a new point of generation for biosludges and treated wastewaters derived from the aggressive biological treatment of listed hazardous wastewaters in NPDES or CWA-pretreatment wastewater treatment systems, so long as the biosludges or treated wastewaters do not exhibit a hazardous waste characteristic. 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. These already dilute listed wastestreams are being treated in wastewater facilities using, at a minimum, secondary treatment standards imposed under the Clean Water Act (CWA). Many of these facilities are also subject to industry-specific categorical standards that are more stringent than secondary treatment standards. The resulting treated wastewater may not be discharged under the CWA unless it meets all established standards. When discharged the treated wastewater is exempt from RCRA. If, however, the treated wastewater is held on site in retention basins, the basins become subject to RCRA regulation. There are several examples of situations in which the treated wastewater is stored on site before discharge in the interest of achieving a better environmental result (e.g., when the water body into which the discharge will flow is flooded or post-aeration basins are used to add oxygen to the water prior to discharge). By exempting the treated wastewater from RCRA controls EPA would allow wiser management choices under a fully protective control regime

promulgated under the CWA and remove the incentive to immediately discharge the waters even in situations where doing so is not the best choice from the point of view of environmental protection. Sludges resulting from aggressive biological treatment of listed hazardous wastewaters are currently regulated as the listed waste, based on the derived from rule. These sludges are formed in the wastewater treatment units, thus are not simply concentrated versions of the listed wastes, but form from aggressively treated wastewaters. 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). EPA has already made exemption determinations for several wastewater treatment sludges on a case-by-case basis, and has even stated that sludges generated from tank-based wastewater treatment systems are a newly generated hazardous waste because they are in a different treatability group than the wastewater that was treated to generate them. Section 1006 of RCRA expressly requires EPA to coordinate hazardous waste regulation with regulation under other federal statutes, including specifically the CWA. Furthermore, the view of Congress that regulation under the CWA should not be pre-empted or duplicated by RCRA is clearly shown in the domestic sewage exclusion, and has been supported by EPA as demonstrated by the exemption provided under RCRA for treatment of hazardous waste in wastewater treatment units regulated under the CWA. EPA has the statutory authority to exempt wastes, either wholly or conditionally, from RCRA regulation where CWA regulation is adequate to prevent harm to human health and the environment, as it is in the case of listed wastewaters after treatment and sludges from aggressive biological treatment. EPA has already exercised that authority in case specific situations and recent listing determinations. This regulatory revision would provide significant relief for the regulated community without sacrificing environmental protection. Should EPA determine that specific industrial biosludges require management in hazardous waste facilities, it could list those specific sludges using routine hazardous waste identification procedures. In support of this proposal, we are submitting information on one GE facility that treats hazardous wastewaters in its wastewater treatment plant. The plant treats F039 landfill leachate, and wastewaters with low concentrations of F- listed solvents (and characteristic wastes), in an activated sludge biological treatment plant. The plant also receives hazardous waste incinerator scrubber waters which do not receive biological treatment, but which do go through a clarifier. The sludges from these two streams are combined in a thickener and filter press system. This combined sludge has been tested for many years under the Waste Analysis Plan required by the site's RCRA permit, and the results from the last three years are provided as Attachment 1. For informational purposes, we have compared these measured levels with the levels that would likely be required for a successful delisting petition for this amount of sludge. The delisting process has been demonstrated to be cumbersome and time consuming, but the data show that the required delisting levels would be met for these parameters. Both public and private resources could be redirected to projects that have environmental benefits if this change were adopted. Recent data on this combined sludge stream for a broader range of parameters are provided as Attachment 2. The data show that these wastewaters have been well treated, even though only some of them have received biological treatment, and no longer need to bear the original waste listings.

CMA7 - Phillips Petroleum Co., WH2P-00014, 5,1

Industry

Proposal 1: EPA should amend 40 CFR 261.3(c)(2)(ii) to establish a new point of generation for

biosludges and treated wastewaters derived from the aggressive biological treatment of listed hazardous wastewaters in NPDES or CWA-pretreatment wastewater treatment systems, so long as the biosludges or treated wastewaters do not exhibit a hazardous waste characteristic. 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. These already dilute listed wastestreams are being treated in wastewater facilities using, at a minimum, secondary treatment standards imposed under the Clean Water Act (CWA). Many of these facilities are also subject to industry-specific categorical standards that are more stringent than secondary treatment standards. The resulting treated wastewater may not be discharged under the CWA unless it meets all established standards. When discharged the treated wastewater is exempt from RCRA. If, however, the treated wastewater is held on site in retention basins, the basins become subject to RCRA regulation. By exempting the treated wastewater from RCRA controls EPA would allow wiser management choices under a fully protective control regime promulgated under the CWA. Sludges from aggressive biological treatment of listed hazardous wastewaters are often regulated as the listed waste, based on the derived from rule. These sludges are formed in the wastewater treatment units, thus are not simply concentrated versions of the listed wastes, but form from aggressively treated wastewaters. 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). EPA has already made exemption determinations for several wastewater treatment sludges on a case-by-case basis, and has even stated that sludges generated from tank-based wastewater treatment systems are a newly generated hazardous waste because they are in a different treatability group than the wastewater that was treated to generate them. Section 1006 of RCRA expressly provides EPA authority to coordinate hazardous waste regulation with regulation under other federal statutes. In fact, the view of Congress that regulation under the CWA should not be pre-empted or duplicated by RCRA is clearly shown in the domestic sewage exclusion, and has been supported by EPA as demonstrated by the exemption provided under RCRA for treatment of hazardous waste in wastewater treatment units regulated under the CWA. EPA has the statutory authority to exempt wastes, either wholly or conditionally, from RCRA regulation where CWA regulation is adequate to prevent harm to human health and the environment, as it is in the case of listed wastewaters after treatment and sludges from aggressive biological treatment. EPA has already exercised that authority in case specific situations and recent listing determinations. This regulatory revision would provide significant relief for the regulated community without sacrificing environmental protection. Should EPA determine that specific industrial biosludges require management in hazardous waste facilities, it could list those specific sludges using routine hazardous waste identification procedures.

CMA7 - Occidental Chemical Corp., WH2P-00046, 9,2 Industry
Residues from Aggressive Biological Treatment Should be Considered a New Point of Generation. Very large volumes of biosludge and treated wastewaters are generated annually in industrial wastewater treatment systems using aggressive biological treatment to manage listed hazardous wastewaters. The untreated wastewaters are deemed to be listed hazardous waste by virtue of the "mixture rule," and the biosludges and treated wastewaters are deemed to be listed

hazardous waste by virtue of the "derived-from rule." However, these biosludges and treated wastewaters are not hazardous and differ dramatically in their physical and chemical makeup from the original listed hazardous wastes from which they are derived. As a result, these high-volume biosludges and treated wastewaters are subjected to costly and unnecessary Subtitle C regulation. The additional costs provide no corresponding benefits of human health or environmental protection. Industrial biosludges are currently being overmanaged as hazardous wastes at a high cost to industry, as a result of the derived-from rule. OxyChem and OVLP believe EPA has: the authority to exempt such sludges from the derived-from rule; or the authority to conditionally exempt such sludges from the derived-from rule; and the authority to subsequently list as hazardous specific biosludges it determines should continue to be regulated as hazardous waste. EPA should amend 40 CFR 261.3(c)(2)(ii) to establish a new point of "generation" for biosludges and treated wastewaters derived from the aggressive biological treatment of listed hazardous wastewaters in NPDES or CWA-pretreatment wastewater treatment systems, so long as the biosludges or treated wastewaters do not exhibit a hazardous characteristic. EPA Has Already Made Such Exemption Determinations for Wastewater Treatment Sludge on Individual Cases. This new-point-of-generation approach has been part of the Land Disposal Restriction program for characteristic wastes for many years. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990). In the LDR program, EPA 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. 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. Sludge from Treatment of U154 Contaminated Groundwater: Sludge generated from wastewater treatment 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) 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.) 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) OxyChem and OVLP believe this distinction makes sense and should be applied more generally to wastewater treatment sludge that does not itself exhibit a hazardous characteristic. EPA Has Also Made Similar Determinations in Recent Hazardous Waste Listings. EPA has also made or is proposing determinations to consider a biosludge as a new point of generation in several final or proposed hazardous waste listing. In these rulemakings, EPA has specifically conducted risk assessments on both the wastewaters generating the biosludges and the biosludges themselves and determined the biosludges did not meet the criteria for listing. The specific biosludges EPA has proposed not to list as hazardous and/or to exempt from the derived-from rule are as follows: Chlorinated Aliphatic (K173) Wastewater Treatment Sludges: The August 25, 1999 proposed rule proposes to

add a new paragraph (E) to the derived-from regulations at 40 CFR 261.3(c)(2)(ii) to make clear that wastewater treatment sludges derived from treating K173 wastewaters will not be hazardous waste via the derived-from rule. EPA states it has studied wastewater treatment sludges from the chlorinated aliphatics industry and made independent hazardous waste listing determinations for several categories of sludges. Such evaluations of the potential risks associated with those sludges supercedes any presumed risk imparted by application of the derived-from rule. (64 FR 46502) Exempted Biosludge Would be Managed as Industrial Non-Hazardous Waste. It is our position that no specific contingent management should be associated with the exempted biosludge. The sludge will be subject to state industrial non-hazardous waste RCRA (Subtitle D) programs, including restrictions on industrial non-hazardous landfilling, combustion and other management options. We see no reason to limit at the federal level the management methods available for exempted biosludge. It is important to point out, however, that there are currently restrictions on certain land applications of sewage sludge. Since industrial biosludge resulting from an aggressive biological treatment system is not significantly different than sewage sludge, we would expect that any restrictions placed on use of sewage sludge would likewise apply to exempted. Under 40 CFR Part 503, EPA has promulgated "ceiling concentrations" for certain metals in sewage sludge that is land applied, as well as "cumulative pollutant loading rates" in units of kilograms per hectare, "monthly average concentrations" in units of milligrams per kilogram, and annual pollutant loading rates in units of kilograms per hectare per 365 day period. All these regulations pertain to metals, including arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc. Because the aggressive biological wastewater treatment systems are so highly effective in removing organics from wastewaters (whether hazardous or non-hazardous), it is assumed that EPA is most concerned with metals in industrial biosludges, just as in sewage sludges. Industrial biosludges are currently being overmanaged as hazardous wastes at a high cost to industry, as a result of the derived-from rule. EPA has: the authority to exempt such sludges from the derived-from rule; or the authority to conditionally exempt such sludges from the derived-from rule; and the authority to subsequently list as hazardous specific biosludges it determines should continue to be regulated as hazardous waste. As a result, OxyChem and OVLP believe that past and current actions by the Agency lend the credence the Agency needs to promulgate an exemption from the derived-from rule as part of the final HWIR rule.

CMA7 - CMA, WH2P-00033, 20,2

Industry Assn.

Residues from Aggressive Biological Treatment Should be Considered a New Point of Generation. Industrial facilities generate very large volumes of listed hazardous wastewaters that are mixed with non-hazardous waste and then treated in industrial wastewater treatment systems using aggressive biological treatment. The untreated wastewaters are deemed to be listed hazardous waste under the mixture rule, and the resulting biosludges and treated wastewaters are deemed to be listed hazardous waste by virtue of the derived-from rule. However, these biosludges and treated wastewaters no longer contain the attributes that made them hazardous and they differ dramatically in their physical and chemical makeup from the original listed hazardous wastes from which they are derived. As a result, these high-volume biosludges and treated wastewaters are unnecessarily subjected to costly Subtitle C regulation since such regulation provides no corresponding benefits of human health or environmental protection. EPA should amend 40 C.F.R. 261.3(c)(2)(ii) to establish a new point of generation for biosludges and treated

wastewaters derived from the aggressive biological treatment of listed hazardous wastewaters in NPDES or CWA-pretreatment wastewater treatment systems, so long as the biosludges or treated wastewaters do not exhibit a hazardous characteristic. Because such a determination would be based on past and current decisions by the Agency, CMA believes an amendment to exempt from the derived-from rule residues of aggressive biological treatment (ABT) can be promulgated as part of the April 30, 2001 final rule. Exemption Should Apply to Wastewaters and Sludges Generated by an Aggressive Biological Treatment System and Subject to Discharge Under the Clean Water Act. Exemption of ABT sludge that exhibits no hazardous characteristic from RCRA Subtitle C regulation will provide tremendous benefit to the chemical industry and other industries that manage large volumes of listed wastewaters. These sludges are large volumes and low toxicity, some even meet RCRA's uniform treatment standard or generic delisting levels. Yet due to the derived-from rule these sludges consume limited – and expensive – combustion, landfill, and other hazardous waste management resources. Public reporting of these very large volumes of derived-from waste also misleads the public over the amount of actually hazardous waste in their communities. Because the derived-from rule applies to treated wastewaters up to the point of discharge, ridiculous situations frequently 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: Facilities discharging to streams with highly variable flow: A facility discharges to a stream that runs high in the winter and very low in the summer. Thus, during periods of low stream flow (e.g., the summer months), the facility needs to hold ABT treated wastewater in a series of equalization ponds or impoundments until the stream flow is sufficient to accept the discharge. The derived-from rule requires these treated wastewaters – wastewater sufficiently treated to be directly discharged to the stream -- to be held in impoundments are regulated under RCRA Subtitle C. Discharges requiring oxygen prior to discharge: Some ABT 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. Wastewater management during flood conditions: 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 ABT treated wastewater in land-based surface impoundments may minimize the impact of discharge on downstream flooding. Spills of ABT treated wastewater: 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. Residues Exempted under CMA's Recommendation Would Be Limited to Those Generated as a Result of Aggressive Biological Treatment. CMA appreciates that an exclusion, such as the one we have proposed, should be predicated on actual treatment of hazardous constituents, not merely their deposition in or on the sludge. Therefore we have proposed that only residues – wastewaters or biosludges – resulting from aggressive biological treatment (ABT) should be candidates for the exclusion. Aggressive Biological Treatment Systems Must be Well Operated. Under the direction of the Clean Water Act, many industry categorical standards have been established which are more restrictive than the secondary treatment requirements. The Organic Chemicals Plastics and

Synthetic Fibers (OCPSF) category standards, for example, were established from the best performing wastewater facilities using the CWA's technology based treatment criteria¹. For OCPSF facilities using biological treatment, EPA promulgated effluent guidelines limitations for 54 constituents 44 of which are also listed as hazardous constituents under RCRA. These effluent limits are below the characteristic levels for all corresponding TC constituents, and only one organic compound is greater than 0.5 mg/l.² Permit limitations are often more stringent than the technology based effluent limitations in order to achieve water quality standards. Therefore, if a facility is in substantial compliance with applicable categorical standards and their permit, it is clear that the treatment of the wastewaters is more than adequate. It is important to note that wastewater (at the point it enters the treatment works) is generally 99% water. So the amounts of organics going to a wastewater treatment system is fundamentally different than concentrations in wastestream managed by other methods. Most facilities installed ABT in response to secondary treatment requirements of the Clean Water Act. It is CMA's position that if an ABT is in compliance with its NPDES permit and with all applicable effluent guidelines, then the system can be assumed effective. EPA Has Already Made Such Exemption Determinations for Wastewater Treatment Sludge on Individual Cases. Nothing in RCRA requires EPA to continue regulating a listed hazardous waste under its initial hazardous waste designation. While EPA has the authority to regulate hazardous wastes from cradle to grave, the endpoint for RCRA regulation does not have to be when the waste is finally disposed. It can be when the waste no longer meets the definition of hazardous waste. This position is not at odds with the Chem Waste decision since that case went to the applicability of the land disposal restrictions to hazardous waste, and not to the issue of when the waste ceases to be hazardous. In fact, EPA has been defining the grave for hazard waste as the end of hazardousness since the beginning of the RCRA program. Any of the exemptions that EPA has promulgated in 40 C.F.R. § 261.2 through § 261.6 that apply after the initial point of generation are examples.³ Many delistings provide other examples where EPA has excluded a waste from being considered a listed hazardous waste and exempted the delisted waste from compliance with many of RCRA's requirements, including the land disposal restrictions standards, before it is placed in its final resting place. Thus, EPA has historically recognized that it could establish an end to regulation under RCRA by determining that a waste is no longer hazardous. The approach that CMA is suggesting is based on precedent from the Land Disposal Restrictions program. A new-point-of-generation approach has been part of the LDR program for characteristic wastes for many years.⁴ Under this program, EPA 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, most particularly when the residuals change their physical characteristics from wastewaters to non-wastewaters. When a prohibited characteristically hazardous waste changes treatability group, EPA allows the facility to both redetermine whether it is a hazardous waste and whether it is a prohibited waste. 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. Sludge from Treatment of U154 Contaminated Groundwater: Sludge generated from wastewater treatment 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.⁵ 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.⁶ 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.⁷ CMA believes this distinction makes sense and should be applied more generally to wastewater treatment sludge that does not itself exhibit a hazardous characteristic. EPA Has Also Made Similar Determinations in Recent Hazardous Waste Listings. EPA has also made or is proposing determinations to consider a biosludge as a new point of generation in several final or proposed hazardous waste listing. In these rulemakings, EPA has specifically conducted risk assessments on both the wastewaters generating the biosludges and the biosludges themselves and determined the biosludges did not meet the criteria for listing. The specific biosludges EPA has proposed not to list as hazardous and/or to exempt from the derived-from rule are as follows: Carbamate Wastewater Treatment Sludges: A February 9, 1995 final rule promulgated as hazardous six wastes generated during the production of carbamate chemicals, including organic waste from the production of carbamates and carbamoyl oximes (K156) and wastewaters generated from the production of carbamates and carbamoyl oximes (K157). EPA also finalized a concentration-based exemption from these two listings. EPA did not list as hazardous, however, the biological treatment sludges associated with any of the K156 and K157 wastes, provided the wastes are not otherwise characteristically hazardous. Rather, a new paragraph (D) was added to 40 C.F.R. 261.3(c)(2)(ii) to exempt the biological treatment sludges derived from K156 and K157 wastes. EPA stated that neither the volatile air pollutants found in the wastewaters nor any other hazardous substances were found to be accumulating in the biological treatment sludges.⁸ Anthraquinone Wastewater Treatment Sludges: The July 23, 1999 proposal to list certain wastestreams in the dye and pigment industries as hazardous specifically declines to propose anthraquinone wastewater treatment sludges as hazardous. EPA states it could not identify any health threat from those sludges.⁹ Chlorinated Aliphatic (K173) Wastewater Treatment Sludges: The August 25, 1999 proposed rule proposes to add a new paragraph (E) to the derived-from regulations at 40 C.F.R. 261.3(c)(2)(ii) to make clear that wastewater treatment sludges derived from treating K173 wastewaters will not be hazardous waste via the derived-from rule. EPA states it has studied wastewater treatment sludges from the chlorinated aliphatics industry and made independent hazardous waste listing determinations for several categories of sludges. Such evaluations of the potential risks associated with those sludges supercedes any presumed risk imparted by application of the derived-from rule.¹⁰ Exempted Biosludge Would be Managed as Industrial Non-Hazardous Waste. It is CMA's position that no specific contingent management should be associated with the exempted biosludge. 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. We see no reason to limit at the federal level the management methods available for exempted biosludge. It is important to point out, however, that there are currently restrictions on certain land applications of sewage sludge. Since industrial biosludge resulting from an aggressive biological treatment system may not be significantly different than sewage sludge, we would expect that any restrictions placed on use of sewage sludge could likewise apply to exempted ABT biosludge. 1. CWA § 301(b) and 306. 2. The effluent guideline for

2,6-dinitrotoluene is 0.641 mg/l; the chemical is identified under RCRA as U106. 3. See e.g., 40 C.F.R. 261.3(a)(iii), (iv), 261.4(b)(6), (9), (10), (11), and (c). 4. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990). 5. March 21, 1996 Letter from James Berlow, EPA to Barton Day, Bryan Cave, LLP 6. May 1, 1997 Letter from Elizabeth Cotsworth, EPA to Dolce, Award Environmental Inc. 7. March 29, 1997 Letter from James Berlow, EPA to Barton Day, Bryan Cave, LLP 8. 60 Fed. Reg. 7824, 7834 (February 9, 1995) 9. 64 Fed. Reg. 40208-09 10. 64 Fed. Reg. 46502

CMA7 - Maine DEP, WH2P-00029, 2,2 State

Sludges from the Biological Treatment of Listed Wastes: The comments relating to Leachate from Land Disposed Listed Waste above also apply to this waste stream. Indeed, EPA proposes retention of the mixture and derived from rules in part because of the potential toxicity of wastewater treatment sludges. See 64 FR 63389.

CMA7 & CMA8- CA Dept. of Toxic Substances Control, WH2P-00009, 1,3 State

We reviewed the proposals from the Chemical Manufacturers Association (CMA) and have the following comments regarding their proposed revisions: CMA proposes exemptions from the derived-from rule for: 1) residues from the combustion of listed hazardous waste; 2) leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the Clean Water Act); and 3) sludges from the biological treatment of listed hazardous wastewaters. DTSC believes that both the residues and sludges from items (1) and (3) above should remain regulated as hazardous wastes. We believe there is a likelihood that residues that result from combusted listed hazardous waste and sludges from the biological treatment of listed hazardous wastewaters could continue to contain constituents which are either in the original listing description, are by-products of the combustion of the listed wastes, or exhibit a characteristic. While we agree that the volume of these wastes may be considerably reduced and may potentially be physically dissimilar from the originally listed wastes, these wastes may contain inorganic constituents which are not on the Toxicity Characteristic Leaching Procedure (TCLP) list, but are nonetheless toxic and bioaccumulative (metals such as nickel and vanadium). We believe these residues and sludges can continue to pose a threat to human health and the environment and should continue to be subject to the derived-from rule. DTSC also believes 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. Since U.S. EPA has not proposed its listing for combustion residues, we believe it is prudent to wait for that proposed rule to address the physical and chemical properties of these wastes before any action is taken on CMA's proposal.

CMA1 & CMA7 - Eastman Chemical Co., WH2P-00050, 2,2 Industry

EPA should promulgate in its final rule the options proposed by CMA for providing relief for certain high-volume, low-risk wastes. 4) The exemption of non-characteristic biosludges from the aggressive biological treatment (ABT) of wastewaters would provide the greatest regulatory relief for high-volume, low-toxicity waste streams to both Eastman and the chemical industry in general.

5) Those wastes exempted would still be managed appropriately and in accordance with solid waste management requirements appropriate for each state. 6) Eastman would realize cost savings in the area of \$61 million to \$76 million if ABT biosludges that do not exhibit a characteristic were exempted from the derived-from rule.

CMA1 & CMA7 & CMA 8 - Eastman Chemical Co., WH2P-00050, 3,1 Industry
IV. EPA SHOULD ADOPT IN ITS FINAL RULE THE OPTIONS PROPOSED BY CMA FOR PROVIDING RELIEF FOR CERTAIN HIGH-VOLUME, LOW-RISK WASTES The MDF rules have added significant costs to the operation of manufacturing facilities throughout the nation, while providing insignificant benefits to human health and the environment. CMA submitted to the Agency various options that would provide immediate relief to MDF wastes, upon promulgation of a final rule. Eastman participated in the development of those options and fully endorses their adoption, as well as incorporates by reference the comments submitted to EPA by CMA in response to this proposal. Eastman commends the Agency for including a discussion of the options in its proposed rule (64 FR 63386-63388). While each of the options will provide relief to a number of companies, the one of primary interest to Eastman and the chemical industry is the one affecting wastewater residues, primarily the biosludge. Eastman also has some interest in the option exempting residues from hazardous waste combustion. Eastman is not unique among manufacturing facilities in believing that the existing MDF rules are capturing many treatment residue waste streams that do not warrant management as hazardous wastes. Indeed, even EPA has considered treatment residues as the major candidate streams for an exit from RCRA Subtitle C. CMA's options would provide the Agency an opportunity to amend existing RCRA code now, separate from any modeling effort to derive risk-based exit levels. Because this proposed rule does not address MDF holistically and only minimally improves the current situation, Eastman believes EPA should further target some specific wastes streams, particularly residues where listed wastes have been treated. The reduction in regulatory burden would be significant. Under CMA's options, whether considering treatment residues from aggressive biological treatment systems (ABTs) or from combustion units, the residues themselves would be viewed as a new point of generation." This is appropriate, because the residues (biosludges from wastewater treatment; ashes and other types of streams from combustion) are both physically and chemically different from the original listed hazardous waste from which they are derived. In each case, they are high-volume, low-risk wastes currently and historically managed as hazardous under RCRA Subtitle C at a very high cost to the generating facilities. It is Eastman's position that if these wastes do not exhibit a characteristic, they can be safely managed under state-managed, Subtitle D waste management programs. Further, Eastman believes that: EPA clearly has the authority to exempt these residues from the derived-from rule; EPA has the authority to conditionally" exempt these residues from the derived-from rule; and EPA has now and has always had the authority to list as hazardous specific residue streams it determines should be regulated as hazardous waste. In separate sections below, the options relevant to ABT biosludges/treated wastewaters and combustion residues and the rationale for their exemption are discussed.

CMA7 - Eastman Chemical Co., WH2P-00050, 4,2 Industry
A. ABT Residues The ABT residues include both biosludge and treated wastewater. Eastman's

primary interest is in an exemption for its ABT biosludge, although there are definite advantages to also having the treated wastewater exempt. 1. The option to exempt residues from the treatment of hazardous wastewaters would only apply if aggressive biological treatment is the management method for the wastewaters and if the resultant residues do not exhibit a characteristic. The exemption for wastewater treatment residues, as proposed by CMA, would be predicated on the facility using an aggressive biological treatment system (ABT) to treat the wastewater AND the resultant residues not exhibiting a characteristic. In addition, the treated wastewaters, in order to be exempt, must be subject to discharge under the Clean Water Act. The requirement for an ABT would ensure actual biological treatment of hazardous constituents. The definition of an ABT for purposes of this exemption would be consistent with the definition at 261.3 1(b)(2)(i) regarding F037 and F038 wastes. It is important to note that the "hazardous" portion of a wastewater stream going into an ABT is very small. The vast majority of wastewaters generated and managed at Eastman facilities is nonhazardous, but the entire stream becomes hazardous because one or more small hazardous waste streams is mixed into the total wastewater stream upstream from the ABT. Further, wastewater entering the treatment works is generally 99 percent water, and is NOT a stream heavily concentrated with organics. Eastman's Kingsport, TN facility manages an average of 28 million gallons of wastewater per day, classified as hazardous because of the mixture rule, with only 3.5 to 5.0 percent of that wastewater listed "RCRA hazardous waste. On average, 400 wet tons per day of biosludge (roughly 13 percent solids) are generated and managed. Eastman's aboveground wastewater treatment facility was completed in 1988 at a cost of \$80 million. There are a number of aeration basins, where organic waste is mixed with nutrients, microorganisms and air. Within the first 30 minutes, the microorganisms consume nearly 90 percent of the organic material. By the end of the one and a half days in which the wastewater remains in the basins, about 99.5 percent of the organic material is consumed (BOD efficiency of 99.5 percent). The byproducts of the biodegradation process are CO₂, water and more microorganisms. Microorganisms are removed from the system periodically to maintain the optimum balance of organics to microorganism mass in the aeration system. The removed microorganisms or "waste activated sludge" is dewatered such that the resultant biosludge is 86 percent water; 3 percent clay (added); 11-12 percent organics, most of which is cell material and protoplasm; and less than 1 percent inorganics and organics that are not cell material or protoplasm. Further, less than 0.1 percent are Appendix VIII constituents. Thus, this state-of-the-art wastewater treatment system generates a very benign, nonhazardous sludge. Eastman facilities installed ABT in response to secondary treatment requirements of the Clean Water Act. Secondary treatment requirements include a minimum removal efficiency of 85 percent, in terms of BOD. Under the direction of the Clean Water Act, many industry categorical standards have been established which are more restrictive than the secondary treatment requirements. The Organic Chemicals Plastics and Synthetic Fibers (OCPSF) category standards, for example, were established from the best performing wastewater facilities. One of the criteria EPA used for "best performing" was the 95%/50 rule which required that the facilities chosen for establishment of the standard achieve BOD reductions >95% and/or the effluent concentration had to be less than 50 mg/L. Other categorical standards are based on similarly stringent criteria. Also, some facilities have NPDES permit limits lower than OCPSF, because of more stringent receiving stream-specific water quality limitations. It is Eastman's experience that if a facility is in substantial compliance with applicable categorical standards, then that facility is more than adequate in its treatment of the wastewater, and the biosludge and treated wastewater should be exempted, unless they exhibit a

characteristic. Thus, the option proposed by CMA and being considered by the Agency would exempt wastewater treatment residues from the derived-from rule at 261.3(c)(2)(ii), if the wastewater were treated in an ABT, if the residues did not exhibit a characteristic, and if the treated wastewaters were subject to discharge under the Clean Water Act. 2. The new point of generation approach has already been used by EPA in other situations, and EPA has already excluded or has proposed to exclude from the derived-from rule some wastewater treatment sludges. EPA has included the new point of generation approach in its LDR program for many years. This has recognized that treatment residuals differ significantly from the wastes from which they are derived and therefore shouldn't be regulated as the same wastes. EPA has also specifically determined that wastewater treatment biosludge constitutes a new point of generation, on the principal that the wastewater being treated falls into one treatability group and the resultant sludge into another. Examples follow:

Sludge from Treatment of U154 Contaminated Groundwater: Sludge generated from wastewater treatment is considered newly generated waste because it is a different treatability group than the wastewater being treated (03/21/96 Berlow, EPA to Day, Bryan Cave, LLP)

LDR Notification Requirements for Wastewaters and Sludges: LDR requirements apply only to wastes that are hazardous at the point of generation; nonhazardous 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.)

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)

Eastman supports this common-sense approach by the Agency. Also supporting the consideration of biosludges as a new point of generation are several final or proposed rulemakings involving the identification and listing of hazardous wastes. In these rulemakings, EPA specifically conducted risk assessments on both the wastewaters generating the biosludges and the biosludges themselves, and determined the biosludges did not meet the criteria for listing. The specific biosludges EPA has proposed not to list as hazardous and/or to exempt from the derived-from rule are as follows:

Anthraquinone Wastewater Treatment Sludges: The July 23, 1999 proposal to list certain waste streams in the dye and pigment industries as hazardous specifically declines to propose anthraquinone wastewater treatment sludges as hazardous. EPA states it could not identify any health threat from those sludges. (64 FR 40208-09)

Chlorinated Aliphatic (K173) Wastewater Treatment Sludges: The August 25, 1999 proposed rule proposes to add a new paragraph (E) to the derived-from regulations at 40 CFR 261.3(c)(2)(ii) to make clear that wastewater treatment sludges derived from treating K173 wastewaters will not be hazardous waste via the derived-from rule. EPA states it has studied wastewater treatment sludges from the chlorinated aliphatics industry and made independent hazardous waste listing determinations for several categories of sludges. Such evaluations of the potential risks associated with those sludges supercede any presumed risk imparted by application of the derived-from rule. (64 FR 46502)

Carbamate Wastewater Treatment Sludges: A February 9, 1995 final rule promulgated as hazardous six wastes generated during the production of carbamate chemicals, including organic waste from the production of carbamates and carbainoyl oximes (K156) and wastewaters generated from the production of carbamates and carbamoyl oximes (K157). EPA also finalized a

concentration-based exemption from these two listings. EPA did not list as hazardous, however, the biological treatment sludges associated with any of the K156 and K157 wastes, provided the wastes are not otherwise characteristically hazardous.” Rather, a new paragraph (D) was added to 40 CFR 261.3(c)(2)(ii) to exempt the biological treatment sludges derived from K156 and K157 wastes. EPA stated that neither the volatile air pollutants found in the wastewaters nor any other hazardous substances were found to be accumulating in the biological treatment sludges. Further, EPA states that while certain constituents, such as bis (2-ethylhexyl)phthalate, methylamine, trimethylamine, naphthalene and 4-methylphenol were all recorded in the wastes, some at concentrations exceeding health-based concentrations, they were not present in mobile forms above health-based levels or aquatic LC50. That is, While some constituents in the solid wastes exceeded the health-based numbers, the constituents were not found to leach from the matrices.” Eastman believes that the Agency has sufficient knowledge of the characteristics of biosludge such that it can be exempted from the derived-from rule, as long as it results from the treatment of wastewater in an ABT and as long as it does not exhibit a characteristic. Eastman has on multiple occasions submitted its biosludge data to the Agency, is currently updating its data matrix from more recent testing, and will once again submit the data to the EPA. These data demonstrate the very low levels of organics and inorganics left in the biosludge after ABT.

3. Exempted ABT Biosludge Would be Managed as Industrial Nonhazardous Waste It is the responsibility of the States to regulate the management of Subtitle D industrial nonhazardous waste. Therefore, once exempted, the biosludge would be managed in state-regulated units under the Subtitle D program, or it conceivably could continue to be managed in Subtitle C units. Eastman would likely consider two management methods for its biosludge, if exempted: combustion or gasification. The current management method is combustion. Each of these management methods is discussed in more detail below.

a. Management of ABT Exempted Biosludge in Combustion Units EPA should have no concerns about exempted biosludge being managed in combustion units. Combustion is the treatment standard for many wastes under the LDR program, and is extremely efficient in destroying organic chemicals. In addition, combustion units are highly regulated, whether utilized for hazardous or nonhazardous waste. If a facility chooses to combust exempted biosludges, it would have the following options, with associated controls:

1. Hazardous Waste Incinerator or Industrial - Furnace (Cement kiln or lightweight aggregate kiln): Combustion of the exempted biosludge would be subject to regulation under CAA Part 63, Subpart EEE, promulgated September 30, 1999.
2. Hazardous Waste Boiler or Industrial Furnace (other than cement kiln or lightweight aggregate kiln): Combustion of the exempted biosludge would be subject to the interim status standards of 40 CFR Part 266, and the upcoming Phase 2 MACT standards for boilers and industrial furnaces.
3. Nonhazardous Incinerator or Boiler: Combustion of the exempted biosludge would be subject to the upcoming emission standards for Commercial and Industrial Solid Waste Incineration Units (proposed on November 30, 1999 at 64 FR 67092). As demonstrated, the combustion of exempted biosludge would occur in highly regulated units.

b. Gasification of Exempted Biosludge Another option for exempted biosludge is that of gasification. Current regulation of biosludges as a derived-from waste is an impediment in their use in gasifiers. The dried biosludge can be used to replace fossil fuels such as coal in a reducing environment of high temperature and pressure to generate a syngas. This syngas can then be used in place of natural gas in a combustion turbine for the generation of electricity. Electric power generation from this type of unit produces substantially less greenhouse gases than conventional coal-fired power generation while conserving both natural gas and coal. Such natural resource conservation

should be encouraged. In an earlier proposal relevant to secondary materials in the petroleum refining industry, EPA discusses gasification and whether secondary materials should be exempted from regulation as a hazardous waste if introduced into a gasifier. EPA states, ... it appears to the Agency that gasification of petroleum industry secondary materials might be an activity warranting exclusion as a matter of Agency discretion (rather than due to a statutory mandate), since gasification of such materials can potentially be viewed as a means of recovering otherwise unutilizable hydrocarbons from the secondary materials..." (63 FR 38141, July 15 1998) Eastman knows its biosludge could also be beneficially gasified, and not having the stigma of the hazardous waste" label attached to it would increase the likelihood of such beneficial use. 4. ABT wastewater is now exempt from RCRA Subtitle C at the point of discharge to the receiving stream and should be exempt as soon as it exits the ABT. Under the Clean Water Act, treated wastewater becomes exempt at the point of discharge. This means that under RCRA, the low-risk treated wastewater has to be managed as hazardous right up to that exempt point of discharge. The benefit of an exemption as per CMA's option would apply to any activities between exit from the ABT and release to the discharging stream under the NPDES. For example, Eastman's Kingsport, TN facility has a post-aeration basin that adds oxygen to the treated wastewater prior to discharge to the receiving stream. Such basin is currently regulated under RCRA Subtitle C. In addition, any spill of the treated wastewater has to be managed as a spill of a hazardous waste. It would be advantageous to manage such minor spills as nonhazardous. Eastman encourages the Agency to exempt wastewater treated in an ABT from the derived-from rule at the point of exit from the ABT.

CMA7 - Eastman Chemical Co., WH2P-00050, 10,1 Industry

V. THE ECONOMIC BENEFIT TO EASTMAN OF AN EXEMPTION FOR ABT RESIDUES

Eastman participated in an EPA HWIR Case Study Report" in 1998, which provided the Agency with detailed information about Eastman's wastewater treatment system, the resultant biosludge, and the cost savings related to an exemption of the biosludge. To briefly reiterate that information, Eastman roughly estimates the potential cost savings resulting from an exemption of the biosludge at about \$61 million to \$76 million. Most of these cost savings result from avoiding future capital expenditures required to continue managing the waste stream as hazardous, rather than avoiding the current costs of managing and disposing of the waste stream. No cost saving estimates have been prepared for exempted combustion residues.

CMA7 & CMA 8 - Eastman Chemical Co., WH2P-00050, 10,6 Industry

Eastman supports a new point of generation approach for wastewater treatment residues and combustion residues. These treatment residues are physically and chemically much different from the original listed hazardous waste from which they are derived. Such approach has been used in the LDR program for many years, and recent final or proposed rulemakings involving the identification and listing of hazardous wastes have also looked at biosludges as a new point of generation. Eastman strongly supports the option to exempt from the derived-from rule those biosludges resulting from the aggressive biological treatment (ABT) of listed hazardous wastewaters, if the biosludges do not exhibit a characteristic. Eastman supports the definition of an ABT as per 40 CFR 261.3 1(b)(2)(i). Eastman supports the exemption from the derived-from rule for treated wastewaters at the point they exit the ABT. They are already exempt at the point of discharge, but exempting them at the point of ABT exit would be beneficial in that post-aeration

basins or other types of units the treated wastewater may pass through before final discharge would not have to be RCRA Subtitle C units. Eastman supports the exemption from the derived-from rule for combustion residues, if such residues do not exhibit a characteristic.

CMA7 - Eastman Chemical Co., WH2P-00050, 11,4 Industry

Exempted biosludges or other treatment residues would be managed as industrial nonhazardous wastes under state Subtitle D programs.

CMA8

General Comments on Exempting Hazardous Waste Combustion Residues

CMA8 & CMA9 - Maine DEP, WH2P-00029, 1,2 State

Section II (E): The Chemical Manufacturers Association (CMA) proposes to exempt solid wastes currently determined to be listed hazardous waste due to the derived from rule under three scenarios: (1) residues from the combustion of listed wastes, (2) leachate from land disposal of listed wastes, and (3) sludges from the biological treatment of listed wastes. These broad exemption proposals are flawed for the reasons provided below. Combustion of Listed Waste: There is a great deal of variability in combustion residues. While some organic compounds are effectively destroyed by the combustion process, other equally or more toxic byproducts (e.g. dioxins) can be produced. In addition, the combustion residues may contain metals at higher concentrations than in the original wastes. Accordingly, while the combustion byproducts may be physically and chemically dissimilar from the listed waste it is derived from, the byproducts have toxic properties which could cause environmental degradation. CMA proposes to exclude such waste from subtitle C regulation unless the wastes exhibit one or more hazardous waste characteristics. However, relying on the TC by itself fails to provide adequate protection of human health and the environment under these circumstances for a variety of reasons. First, not all metals of concern are covered by the TC. Second, the TC only measures potential risks via the groundwater pathway. It is not at all clear 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 were clearly hazardous. EPA states in 55 FR 11799 The regulatory levels for characteristics that have been established provide a high degree of certainty that wastes exceeding those regulatory levels would pose hazards to human health and the environment if improperly managed and therefore require regulation under subtitle C. Wastes that do not exhibit hazardous waste characteristics are not necessarily non-hazardous. Indeed, EPA is fully aware of these TC limitations, which is why it is developing a multipathway risk analysis to set derived from exit levels. For these reasons, the Department supports further exploration of an appropriate multi source listing for these wastes in lieu of exempting outright these derived from wastes.

CMA8 - Eli Lilly and Co., WHWP-00201, 12,2

Industry

[...] At a minimum, Lilly recommends that the Agency modify the derived-from rule at least to the extent that residuals from treatment of hazardous waste in a RCRA permitted Subpart O incinerator are evaluated against the regulatory criteria for characteristic hazardous waste. In other words, rather than perpetuating the legal fiction of the derived-from rule and assuming that the residuals from incineration remain listed hazardous waste, Lilly believes that the permitted incineration process should be treated as a new "point of generation" and that the residuals from the permitted treatment process should be managed as hazardous waste only if they exhibit a characteristic of hazardous waste. Such a rule would more fairly reflect the potential hazards of the treatment residuals, if any, and be as protective of human health and the environment as the disposal of many other types of solid wastes which are disposed of which did not originate as listed wastes. For the reasons set forth in detail above, Lilly suggests the following modification to the derived-from rule (40 CFR 261.3): (c) Unless and until it meets the criteria of paragraph (d) of this section: (1) A hazardous waste will remain a hazardous waste. (2)(i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage or disposal of a

hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste (ii) The following solid waste are not hazardous even though they are generated from the treatment, storage or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste: (A) Waste from treatment of listed hazardous waste in a hazardous waste incinerator subject to Subpart O of part 264. 1 /Lilly believes that this modification to the derived-from rule is consistent with the Agency's statutory authority and would recognize that the management of listed hazardous waste in a permitted treatment unit which is intended to destroy the constituents which are the basis of the listing is a sound waste management technique (indeed, a technique which is required by the agency's land disposal restrictions rules for many wastes). Lilly believes that this modification would be fully protective of human health and the environment since the listed wastes are effectively destroyed by the incineration process. The Agency would have ample authority under the permit to insure proper operation of a permitted unit and to ensure complete combustion and compliance with the required 99.99% treatment requirement. 1/ More broadly, the derived-from rule could be modified as follows: "Waste from treatment of list hazardous waste in a treatment facility which is permitted under Part 270 of this part to manage the listed waste."

CMA8 & OTH10 - Ciba-Geigy Corp. WHWP-00197, Ltr.

Industry

[...] If these important revisions will require the Agency to miss its court ordered deadline for finalizing the HWIR rule, we recommend EPA provide an interim final rule that provides relief to the regulated community by adopting one or both of the following exemptions: (1) Wastes that meet the applicable waste code specific LDR requirement and the Universal Treatment Standards (UTS) should be exempted from carrying any listed waste codes. (2) Except for wastes listed for metals, the residues from non-commercial permitted Subtitle O incineration (e.g. incinerator scrubber water, slag and ash), should be exempted from the derived-from rule. Both of these exemptions would apply to materials which the Agency has already determined meet a "minimize threat" standard and should be expeditiously exempted from the hazardous waste listings.

CMA6 & CMA7 & CMA8 - Ohio EPA, WH2P-00030, 4,3

State

Request for Comment: Should the following three wastes be exempt from the derived-from rule?

1. Residues from the combustion of listed hazardous wastes. 2. Leachate, from the land disposal of a listed hazardous waste that is subsequently managed in a wastewater treatment system regulated under CWA. 3. Sludges generated from the biological treatment of listed hazardous wastewater.

Comment: Ohio EPA thinks that there may be merit in exempting the above treatment residues from the derived-from rule. However, to make a definitive decision, we 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 three residues in question are generated either from bonafide treatment methods proven to detoxify or otherwise treat hazardous waste, or from the disposal of hazardous waste. The residues are physically and/or chemically different from the hazardous wastes they were generated from. Therefore, we believe it is appropriate to view the residues as newly generated wastes and impose RCRA regulation if the waste exhibits a hazardous waste characteristic. Furthermore, the derived-from and mixture rules were developed by U. S. EPA to

close a regulatory loophole and to ensure that hazardous wastes are treated by a bonafide treatment method that reduces, detoxifies, or immobilizes hazardous constituents. Treatment means the hazardous constituent or characteristic of the waste has been reduced, detoxified, immobilized or otherwise treated to minimize the threat to human health and the environment when disposed. Combustion and biological treatment are bonafide hazardous waste treatment methods as evident through their use in the LDR program. Also, leachate is generated from landfills where only treated hazardous wastes are disposed. Since bonafide treatment occurs or has occurred in these scenarios applying the derived-from rule to the residues is not appropriate. This is because the purpose for which the derived-from and mixture rules were developed (i.e. to ensure proper treatment of a listed hazardous waste) has been attained for the original listed hazardous waste. Therefore, we find it reasonable to consider the residues newly generated wastes and subject to RCRA regulation if they exhibit a hazardous waste characteristic. Also, if these residues merit listing in accordance with §261.11 then they should be listed through that process.

CMA2 & CMA7 & CMA8- BP Amoco Chemicals, WH2P-00041, 2,1 Industry
BP Amoco Chemicals supports the derived-from rule revisions suggested by CMA for residues from combustion of listed wastes, leachate from land disposal of listed waste (treated in a Clean Water Act (CWA) permitted system) and sludges from aggressive biological treatment of listed hazardous wastewaters. Residues from combustion and biological treatment processes will have significantly reduced organic constituent concentrations relative to the original waste. EPA should recognize that residues derived from combustion and aggressive biological treatment are fundamentally different (both chemically and physically) from the originally listed wastes and treat these residues as a new point of generation.

CMA2 & CMA7 & CMA8- API, WH2P-00031, 2,4 Industry Assn.
EPA included in the proposal several regulatory options received from the Chemical Manufacturers Association (CMA). 64 Fed. Reg. 63386. API supports exempting from the hazardous waste derived-from rule the following: [1] Residues from the combustion of listed hazardous waste; [2] Leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the Clean Water Act); and [3] Sludges from the biological treatment of listed hazardous wastewaters. API agrees with CMA that these wastes are physically and chemically dissimilar from the wastes that were originally listed. API also agrees with CMA that combustion and biological treatment can greatly reduce or eliminate organic chemicals. For these reasons, it is appropriate to exclude these from regulation as hazardous wastes.

CMA7 & CMA8- CA Dept. of Toxic Substances Control, WH2P-00009, 1,3 State
We reviewed the proposals from the Chemical Manufacturers Association (CMA) and have the following comments regarding their proposed revisions: CMA proposes exemptions from the derived-from rule for: 1) residues from the combustion of listed hazardous waste; 2) leachate from the land disposal of listed hazardous waste (that is subsequently managed in a system regulated under the Clean Water Act); and 3) sludges from the biological treatment of listed

hazardous wastewaters. DTSC believes that both the residues and sludges from items (1) and (3) above should remain regulated as hazardous wastes. We believe there is a likelihood that residues that result from combusted listed hazardous waste and sludges from the biological treatment of listed hazardous wastewaters could continue to contain constituents which are either in the original listing description, are by-products of the combustion of the listed wastes, or exhibit a characteristic. While we agree that the volume of these wastes may be considerably reduced and may potentially be physically dissimilar from the originally listed wastes, these wastes may contain inorganic constituents which are not on the Toxicity Characteristic Leaching Procedure (TCLP) list, but are nonetheless toxic and bioaccumulative (metals such as nickel and vanadium). We believe these residues and sludges can continue to pose a threat to human health and the environment and should continue to be subject to the derived-from rule. DTSC also believes 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. Since U.S. EPA has not proposed its listing for combustion residues, we believe it is prudent to wait for that proposed rule to address the physical and chemical properties of these wastes before any action is taken on CMA's proposal.

CMA8 - Occidental Chemical Corp., WH2P-00046, 14,1 Industry
Residues from Hazardous Waste Combustion Should be Considered a New Point of Generation. Due to the "derived-from rule," solids, and wastewaters derived from the combustion of listed hazardous wastes must be managed as hazardous wastes. However, 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, which can be adequately and protectively managed in wastewater treatment systems and industrial, non-hazardous waste landfills. The high cost of regulating these materials as hazardous waste also purchases little or no increased protection of human health and the environment, particularly as the combustion process destroys virtually all of the organics in the listed wastes from which these residuals are derived. EPA should amend 40 CFR 261.3(c)(2)(ii) to establish a new point of "generation" for wastes derived from permitted or interim status hazardous waste combustors burning listed hazardous wastes, so long as the residues do not exhibit a hazardous characteristic. This new-point-of-generation approach has been part of the Land Disposal Restriction program for characteristic wastes for many years. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990). In the LDR program, EPA 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. Residues Exempted under CMA's Recommendation Would be Limited to Those Generated as a Result of Combustion in Permitted Hazardous Waste Combustion Units. CMA's recommendation only address the residues of proper hazardous waste combustion. It is not intended to amend the regulatory status of the wastestreams entering the hazardous waste combustion unit or the regulatory requirement imposed on the combustion unit. As a result, the proposed exemption would only apply to residues -- ash, scrubber water, stripper water, and sludges generated from scrubbers or strippers. Hazardous Waste Combustion Units Must be Well Operated. In combustion-related rulemakings, EPA has consistently 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. EPA determined that CO (or

THC) is the best indicator of combustion efficiency, and that combustion units operating with CO emissions less than 100 ppmv generally pose no significant risk. EPA has specified two parameters to insure that organics are properly destroyed in a combustor. The first is a carbon monoxide (CO) emission limit of 100 ppmv [266.104(b) for hazardous waste boilers and industrial furnaces (BIFs) and 63.1203(a)(5) for hazardous waste incinerators] or alternately a total halogen content (THC) limit [20ppmv for BIFs and 10 pmv for incinerators]. The second requirement is a demonstration that the unit can achieve an organic destruction and removal efficiency (DRE) of 99.99 % (a statutory requirement). In its preparation of the recent hazardous waste incinerator MACT rule, EPA conducted a study of the correlation between CO emissions and DRE results. Based on the study, EPA concluded that, in the vast majority of DRE test conditions, if a unit operated with carbon monoxide levels of less than 100 ppmv, the unit met or surpassed four-nines DRE. EPA's own analysis has shown that combustion units operating with less than 100 ppmv CO emissions have high combustion efficiencies and pose no significant risk. Therefore, CMA recommends the exemption be limited to residues from units that continuously monitors stack emissions of CO, and do not exceed a CO level of 100 ppmv measured as an hourly rolling average. Exempted Solids and Wastewaters Must be Managed Under Appropriate Regulatory Schemes. It is CMA's position exempted solids residues from hazardous waste combustion units that do not exhibit any toxicity characteristic would be considered industrial non-hazardous waste. As such, the materials would be subject to state industrial non-hazardous waste RCRA (Subtitle D) programs. At this point CMA does not see the value in additional contingent management or other restrictions at the federal level. Exempted wastewaters would be managed in wastewater treatment systems regulated under the Clean Water Act. Because the wastewaters would be exempted, any sludge generated as a result of treatment of the wastewaters would not be hazardous, but would be managed in accordance with state industrial non-hazardous waste requirements. OxyChem and OVLP believe that past and current actions by the Agency lend the credence the Agency needs to promulgate an exemption from the derived-from rule as part of the final HWIR rule.

CMA8 - CMA, WH2P-00033, 28,3

Industry Assn.

Residues from Hazardous Waste Combustion Should be Considered a New Point of Generation. Due to the derived-from rule, EPA considers solids and wastewaters derived from the combustion of listed hazardous wastes to be hazardous wastes. However, 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 adequately and protectively managed 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.¹ The new-point-of-generation approach that CMA advocates has been part of the Land Disposal Restriction program for characteristic wastes for many years² under which, 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. EPA should expand the change-in-treatability-group concept by amending 40 C.F.R. 261.3(c)(2)(ii) to establish a new point of generation for wastes derived from combustion of hazardous wastes in permitted or interim status hazardous waste combustors, so long as the residues do not exhibit a hazardous characteristic. Because this amendment would be consistent with previous Agency policies regarding exemptions from the definition of hazardous waste and the land disposal restrictions program, EPA can promulgate it as part of the final April 30, 2001 final rule.

a. Residues Exempted under CMA's Recommendation Would be Limited to Those Generated From Combustion in Regulated Hazardous Waste Combustion Units. CMA's recommendation only addresses residues resulting from regulatorily controlled combustion of hazardous waste. It is not intended to amend the regulatory status of the wastestreams entering the hazardous waste combustion unit or the regulatory requirement imposed on the combustion unit. As a result, the proposed exemption would only apply to residues from the hazardous waste combustion -- ash, scrubber water, and sludges.

b. Exempted Solids and Wastewaters Would be Managed Under Appropriate Regulatory Schemes. Under CMA's recommendation, solids residues from hazardous waste combustion units that do not exhibit any toxicity characteristic³ would be considered industrial non-hazardous waste. As such, the materials would be subject to state industrial non-hazardous waste RCRA (Subtitle D) programs. Wastewaters (e.g. scrubber waters) would be managed in systems regulated under the Clean Water Act. At this point CMA does not see the value in additional contingent management or other restrictions at the federal level.

1. Appendix VII to Part 266 -- Health-Based Limits for Exclusion of Waste-Derived Residues
2. See, e.g., 55 Fed. Reg. at 22,661-62 (June 1, 1990)
3. For other Appendix VIII metals not included in the Toxicity Characteristic (i.e., Antimony, Beryllium, Nickel, Thallium), CMA supports 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.

CMA8 - General Electric Corp., WH2P-00005, 7,2

Industry

Proposal 2: EPA should consider residues from hazardous waste combustion a new point of generation. As a newly generated waste they would be exempt from listed hazardous wastes by operation of the derived-from rule, and would be regulated as hazardous only if they exhibit a hazardous waste characteristic. Residuals from hazardous waste combustion differ substantially in physical and chemical makeup from the original wastes that were combusted. The combustion process itself destroys virtually all organics in the original listed wastes, and the increasingly sophisticated wastewater treatment systems and state industrial waste management regulations are sufficient to handle the remaining residuals that do not exhibit a hazardous waste characteristic, including ash, scrubber water, stripper water, and sludges generated from scrubbers or strippers. If the wastewaters are directed to wastewater treatment facilities subject to regulation under the CWA, EPA can easily support exemption from RCRA regulation under Section 1006 of RCRA. In addition, for other combustion residues a state regulated industrial non-hazardous waste facility would receive the wastes, obviating the need for a contingent management plan for these wastes. The original listed wastes to be combusted would still be subject to the LDR treatment standards, and the combustion units would still be subject to hazardous waste incinerator rules. Consistent with EPA's LDR interpretations, the residue resulting from one step in a treatment train would be

re-evaluated if it were a new treatability group. In this proposal, the re-evaluation would simply determine whether the newly generated waste would be subject to regulation (or not) based on its own characteristics. Since virtually all organics are destroyed and since the metals EPA has identified as of concern are included in the toxicity characteristic, there should be no need to continue to apply LDRs to the residuals from hazardous waste combustion. In particular, GE supports the exclusion for residues from hazardous waste combustion in a RCRA permitted incinerator. These incinerators are required by permits and MACT standards to be highly efficient in treating constituents of concern. Set out below are summaries of the features of two of the incinerators operated by GE. The first incinerator is a Rotary Kiln Incinerator (RKI) that operates under a Hazardous Waste Management Permit issued by the State to burn wastes generated on site. Wastes are transported to the RKI by either pumping the waste from production area accumulation tanks to the incinerator storage tanks, or transporting the waste by tank wagons or drums to be blended and/or fed to the RKI. The RKI furnace is a refractory-lined rotating cylinder with parallel sides that slope downward to the secondary combustion chamber. As the kiln rotates, the burning wastes are mixed thoroughly and move toward the lower end of the kiln. The front wall of the kiln is equipped with a main burner, several nozzles that can be fitted with individual liquid waste lances, and a feed chute for the introduction of drummed wastes and small containers. Wastewater stripper air and process and tank farm vents are also processed through the RKI. The stripper air is introduced through the primary combustion air blower. The secondary combustion chamber (SCC) is a vertical inverted U-shape refractory-lined chamber of rectangular cross-section design. Secondary air is injected into the SCC to provide the additional turbulence needed to achieve the complete oxidation of the gaseous products of combustion. Flue gas temperatures are maintained to ensure thermal destruction of organic compounds. The off-gas cleaning system components include a quench tower, a counter-current scrubber, two parallel trains of three ionizing wet scrubbers (IWS), two induced draft fans, and one stack. This system generates the scrubber water that is further managed in the wastewater treatment facility. The operating parameters and operating limits of the RKI are provided in the Table 1 below: TABLE 1 OPERATING PARAMETERS AND LIMITS FOR RKI OPERATING PARAMETER OPERATING LIMITS Combustion Temperature (upper SCC) <900-1175/C Combustion Temperature (lower SCC) <945-1200/C Combustion Gas Velocity =21,000 ACFM Combustion Chamber Pressure =0.08 inches H2O Permitted Wastes (no offsite generated wastes) F001, F02, F003, F005, F039, D001, D002, D003 The second incinerator is a Fixed Box Incinerator (FBI) also permitted by the State to burn hazardous wastes generated on site. Wastes are transported to the FBI by either pumping them from production area accumulation tanks to the incinerator storage tanks, or transporting them by tank wagons. Prior to feeding any hazardous wastes, the incinerator is brought up to operating temperature by burning No. 2 commercial fuel oil in the incinerator burner. The operating characteristics of the unit are presented in Table 2. The incinerator chamber has a refractory/insulation system encased by a steel outer shell. The construction is suitable for chamber temperatures of 2300 degrees F. TABLE 2 OPERATING PARAMETERS AND LIMITS FOR FIXED BOX #2 OPERATING PARAMETER OPERATING LIMITS Combustion Temperature 970-1150 degrees Celsius Combustion Gas Velocity (stack #1) <7010 Actual Cubic Feet per Minute (ACFM) Combustion Gas Velocity (stack #2) <7020 ACFM Permitted Wastes (no offsite generated wastes) F001, F002, F003, F005, F039, D001, D002, D003 The flue gas generated from the incineration of wastes exits the incinerator chamber through a refractory lined duct into a quench chamber where the flue gas is cooled by direct contact with water. The cooled

flue gas from the quench chamber enters a countercurrent packed scrubber for removal of large particulates and acid gases. Scrubbing water is sprayed over the top of the tower packing. The spent scrubbing water is discharged to the plant treatment system for ultimate disposal. Each scrubber has an entrainment separator at the top to remove entrained water or solids. The final stage of flue gas treatment is particulate and acid gas removal by Ionizing Wet Scrubbers (IWS). The IWS collect sub-micron particulates, liquid particles and water-soluble gases. Every two hours the plates are flushed with water for approximately two minutes and drained for approximately two minutes. This water is also discharged to the plant wastewater treatment system. The incinerator's control system incorporates an automatic waste feed cutoff system. Waste feed is prevented when there are abnormal temperature conditions, improper flow rates, or other abnormal operating conditions. Such emergency conditions occur if there is a loss of cooling water to the quench or scrubber, a quench discharge temperature that is too high, or power failure. When the emergency vent stack opens all hazardous waste feed to the incinerator is automatically shut off. In addition to automatic opening of the vent stack, the operator may open it manually in the case of a perceived emergency. In this case the waste flows will also stop automatically. Although these incinerators generate both solids that are removed from the bottom of the incinerators, and offgas with particulate matter that goes to the scrubber systems, we are particularly interested in making the proposed exemption apply to the sludge resulting from the offgas stream. As required by permits, this offgas stream goes through the above described scrubber systems that generate a wastewater stream. This stream ultimately goes through a clarifier and becomes a sludge which, because of the derived from rule, is handled as a hazardous waste even though the original basis for being a hazardous waste is no longer applicable. GE has recently sampled the sludge from this incinerator scrubber wastewater sludge stream, and the results are presented in Attachment 3, and demonstrate that this wastestream has been treated to such an extent that it no longer deserves to be regulated under the mixture or derived from rules.

CMA8 - Phillips Petroleum Co., WH2P-00014, 6,2

Industry

Proposal 2: EPA should consider residues from hazardous waste combustion a new point of generation. As a newly generated waste they would be exempt from characterization as listed hazardous wastes by operation of the derived-from rule, and would be regulated as hazardous only if they exhibit a hazardous waste characteristic. Residuals from hazardous waste combustion differ substantially in physical and chemical makeup from the original wastes from which they were derived. The combustion process itself destroys virtually all organics in the original listed wastes, and the increasingly sophisticated wastewater treatment systems and state industrial waste management regulations are sufficient to handle the remaining residuals that do not exhibit a hazardous waste characteristic, including ash, scrubber water, stripper water, and sludge generated from scrubbers or strippers. If the wastewaters are directed to wastewater treatment facilities subject to regulation under the CWA, EPA can easily support exemption from RCRA regulation under Section 1006 of RCRA. In addition, for other combustion residues a state regulated industrial non-hazardous waste facility would receive the wastes, obviating the need for a contingent management plan for these wastes. The original listed wastes to be combusted would still be subject to the LDR treatment standards, and the combustion units would still be subject to hazardous waste incinerator rules. Consistent with EPA's LDR interpretations, the residue resulting from one step in a treatment train would be re-evaluated if it is a new treatability group.

In this proposal, the re-evaluation would simply determine whether the newly generated waste would be subject to regulation based on its own characteristics.

CMA8 - International Precious Metals Institute, WH2P-00032, 1,2 Industry Assn.

We support, with one qualification described below, the proposal of the Chemical Manufacturers Association entitled New Point of Generation for Residues Derived from Combustion of Hazardous Waste. We interpret the words permitted or interim status in the CMA proposal to mean authorized only pursuant to 40 CFR parts 264 and 265. Recovery of precious metals from hazardous waste is not a TSDF operation, and we do not permit our facilities under those parts. Instead we operate pursuant to part 266, subpart F. We agree with the CMA that residues derived from combustion of hazardous waste differ so dramatically in their physical and chemical makeup from the original listed hazardous wastes that continuation of the original listing is neither beneficial nor realistically descriptive, and is likely instead to cause confusion and unnecessary problems and obstacles. Accordingly, we agree with the CMA that such residues should be considered newly generated, and their original listing should terminate. As an example of incongruity we have experienced with a continued hazardous waste listing of furnace residues under the derived-from rule, we offer the case of burning spent platinum-on-carbon catalyst to recover the platinum. Such spent catalyst has frequently been classified by its generator as a listed hazardous waste, e.g. F005, because, again for example, toluene has been used to wash it free of product immediately after its removal from a production line. (Such a spent catalyst may also be classified as D001, characteristically hazardous for ignitability, also because of toluene.) The F005 classification of the spent catalyst is based primarily upon a very small percentage of toluene content, and the application of the mixture rule, and thus is already not descriptive of the actual material in issue. We thermally oxidize (and destroy) both the carbon and the toluene contents of the spent catalyst, and the residual ash is very highly concentrated platinum, containing less than five percent of the original volume of spent catalyst, with no hazardous characteristics. A continuing classification of such material as F005 hazardous waste provides no protection or benefit to anyone, distorts any statistical overview of the generation and treatment of real hazardous waste, and creates a technical barrier to trade in a very valuable material. We therefore are in complete agreement with the CMA that a residue of combustion should not continue to carry the listing of its original material. We differ slightly, however, with the CMA as to the proposed language by which its proposal would be codified. The CMA has proposed the following addition to the exclusions from the derived-from rule: 261.3(c)(2)(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste: Wastes derived from burning any listed hazardous waste in a permitted or interim status hazardous waste combustion device. We believe that the goals of the CMA and those of the IPMI can be met with a small change, and therefore propose that the appropriate added language be: 261.3(c)(2)(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste: Wastes derived from burning any listed hazardous waste in a hazardous waste combustion device authorized pursuant to parts 264, 265 and 266.100(f). Our reason for this proposal is that we interpret the words permitted or interim status in the CMA proposal to mean authorized only pursuant to 40 CFR parts 264 and 265. Recovery of precious metals from

hazardous waste is not a TSDf operation, and we do not permit our facilities under those parts. Instead, we operate pursuant to part 266, subpart F. Furthermore, we burn in industrial furnaces that can not, for sound technical reasons, precisely follow the same procedures as TSDf permitted or interim hazardous waste combustion devices. Most specifically, our furnaces differ in primary chamber operating temperatures, excess air and turbulence. In the example of our operations given above, if the spent catalyst were inserted into a TSDf permitted furnace, operating with excess oxygen at 2000 degrees Fahrenheit, the furnace will not only destroy the carbon but will also cause the loss of a great deal of platinum. These reasons have been more extensively presented to the Agency in past rulemakings, together with evidence of our extensive use of emission control systems, which both protect the environment and prevent losses of precious metals into the environment. Our demonstration of equivalent management practices and environmental protection was accepted by the Agency as the basis for the precious metals conditional exemption from the boilers and industrial furnace (BIF) rule (240 CFR 266.100(f)). The change of language we propose would not lessen the beneficial result sought by the CMA, but would broaden it slightly to include residues from precious metal reclamation operations that EPA has approved as fully protective of human health and the environment. Such precious metal-bearing residues are also environmentally safe for two additional reasons. First, we do not propose by this comment, nor does the CMA, removal of the existing condition of 261.3(c)(2)(ii) that such precious metal-bearing residues must not exhibit one or more of the characteristics of hazardous waste. Second, our residues must, to partake of the authority of part 266.100(f), contain economically significant amounts of precious metals, and thus will be further reclaimed rather than disposed, ensuring environmentally protective management. In conclusion, we reiterate that a residue of combustion of hazardous waste is dramatically different from the hazardous waste itself, and concur with the CMA that post-combustion continuation of an original listing does not advance the best interests of anyone. A new, post-combustion determination of an appropriate RCRA classification should be made.

CMA8 - NY Dept. of Env. Conservation, WH2P-00048, 4,2 State

2. CMA's Recommendations on Combustion Residues CMA presented three proposals involving exemptions from the derived-from rule. These involved residues from the combustion of listed hazardous waste, leachate from the land disposal of listed wastes, provided that it is subsequently managed in a system regulated under the CWA, and sludges from the biological treatment of listed hazardous wastewaters. This Department believes that the potentially complex chemistries of residues associated with the latter two proposals preclude an exemption from the derived-from rule. However, the initial proposal, involving residues from the combustion of listed hazardous waste, has possibilities. An exemption for combustion residues from the derived-from rule could be appropriate under the following circumstances: A. Combustion must take place in a permitted (not interim status) hazardous waste combustion device, B. Any listed wastes involved are listed for organic hazardous constituents only, C. The residual, of course, must not exhibit any characteristics, and D. The residues meet LDRs, including for underlying constituents. Once this is demonstrated by testing, the material is not a hazardous waste. It can occur at the point of generation or, subsequently, after treatment to meet LDR standards. This approach would be fully protective of human health and the environment and would allow many combustion residues to exit Subtitle C regulation once LDRs are met. This approach would not have to affect combustion

residues that are already covered by the Bevill exclusion.

CMA8 & CMA9 - ETC, WH2P-00034, 2,4

Waste Mgmt. Assn.

[...] The option of exempting all residues from the combustion of listed hazardous wastes from RCRA is not supportable. EPA's upcoming approach for addressing combustion residues through a multi-source listing code and tailored regulatory requirements, particularly testing and analytical requirements, is much preferable. As EPA points out, combustion residues often contain concentrations of heavy metals that warrant further treatment and Subtitle C disposal. The alternative option does not address how LDR treatment standards would apply to these residues. Even if the combustion residues were fully subject to LDR treatment, the ETC strongly believes that Subtitle C management and disposal are necessary to ensure public health and environmental protection. In lieu of the CMA option, we look forward to the agency's proposal of a multi-source listing code and tailored testing and analysis requirements (e.g., the use of surrogate analytes).

CMA8 - Onyx Env. Services, WH2P-00015, 2,4

Waste Mgmt. Co.

B. Other Regulatory Options Received From Stakeholders. 1. Combustion Residues. Onyx Environmental Services, L.L.C. (OES) supports CMA's position of exempting certain combustion residues from hazardous waste regulation, as proposed in their August 18, 1999 position paper. OES also believes that these wastes derived-from the treatment of hazardous wastes are both chemically and physically dissimilar from the wastes that were originally listed, and should be exempted, unless the residues exhibit one or more characteristics in 40 CFR Part 261 Subpart C. [...]

CMA1 & CMA7 & CMA 8 - Eastman Chemical Co., WH2P-00050, 3,1

Industry

IV. EPA SHOULD ADOPT IN ITS FINAL RULE THE OPTIONS PROPOSED BY CMA FOR PROVIDING RELIEF FOR CERTAIN HIGH-VOLUME, LOW-RISK WASTES The MDF rules have added significant costs to the operation of manufacturing facilities throughout the nation, while providing insignificant benefits to human health and the environment. CMA submitted to the Agency various options that would provide immediate relief to MDF wastes, upon promulgation of a final rule. Eastman participated in the development of those options and fully endorses their adoption, as well as incorporates by reference the comments submitted to EPA by CMA in response to this proposal. Eastman commends the Agency for including a discussion of the options in its proposed rule (64 FR 63386-63388). While each of the options will provide relief to a number of companies, the one of primary interest to Eastman and the chemical industry is the one affecting wastewater residues, primarily the biosludge. Eastman also has some interest in the option exempting residues from hazardous waste combustion. Eastman is not unique among manufacturing facilities in believing that the existing MDF rules are capturing many treatment residue waste streams that do not warrant management as hazardous wastes. Indeed, even EPA has considered treatment residues as the major candidate streams for an exit from RCRA Subtitle C. CMA's options would provide the Agency an opportunity to amend existing RCRA code now, separate from any modeling effort to derive risk-based exit levels. Because this proposed rule does not address MDF holistically and only minimally improves the current situation, Eastman

believes EPA should further target some specific wastes streams, particularly residues where listed wastes have been treated. The reduction in regulatory burden would be significant. Under CMA's options, whether considering treatment residues from aggressive biological treatment systems (ABTs) or from combustion units, the residues themselves would be viewed as a new point of generation." This is appropriate, because the residues (biosludges from wastewater treatment; ashes and other types of streams from combustion) are both physically and chemically different from the original listed hazardous waste from which they are derived. In each case, they are high-volume, low-risk wastes currently and historically managed as hazardous under RCRA Subtitle C at a very high cost to the generating facilities. It is Eastman's position that if these wastes do not exhibit a characteristic, they can be safely managed under state-managed, Subtitle D waste management programs. Further, Eastman believes that: EPA clearly has the authority to exempt these residues from the derived-from rule; EPA has the authority to conditionally" exempt these residues from the derived-from rule; and EPA has now and has always had the authority to list as hazardous specific residue streams it determines should be regulated as hazardous waste. In separate sections below, the options relevant to ABT biosludges/treated wastewaters and combustion residues and the rationale for their exemption are discussed.

CMA 8 - Eastman Chemical Co., WH2P-00050, 9,3

Industry

B. Residues From Hazardous Waste Combustion Should Be Considered a New Point of Generation. Hazardous waste combustion units are stringently regulated and are highly efficient in their destruction of organic chemicals. Thus, the residues resulting from such units are entirely different from the hazardous waste(s) from which they are derived, they should be considered a new point of generation, and they should be exempted from regulation under Subtitle C, if they don't exhibit a characteristic. Management in state-regulated Subtitle D waste management units should be considered sufficient management. Eastman supports an amendment to 261 .3(c)(2)(ii) to exempt from the derived-from rule those treatment residues resulting from the combustion of hazardous waste(s) in hazardous waste combustion units that are regulated by the EPA under Subtitle C.

CMA7 & CMA 8 - Eastman Chemical Co., WH2P-00050, 10,6

Industry

Eastman supports a new point of generation approach for wastewater treatment residues and combustion residues. These treatment residues are physically and chemically much different from the original listed hazardous waste from which they are derived. Such approach has been used in the LDR program for many years, and recent final or proposed rulemakings involving the identification and listing of hazardous wastes have also looked at biosludges as a new point of generation. Eastman strongly supports the option to exempt from the derived-from rule those biosludges resulting from the aggressive biological treatment (ABT) of listed hazardous wastewaters, if the biosludges do not exhibit a characteristic. Eastman supports the definition of an ABT as per 40 CFR 261.3 1(b)(2)(i). Eastman supports the exemption from the derived-from rule for treated wastewaters at the point they exit the ABT. They are already exempt at the point of discharge, but exempting them at the point of ABT exit would be beneficial in that post-aeration basins or other types of units the treated wastewater may pass through before final discharge would not have to be RCRA Subtitle C units. Eastman supports the exemption from the derived-from rule for combustion residues, if such residues do not exhibit a characteristic.

CMA9

General Comments on the Multisource Listing for Combustion Residue

CMA8 & CMA9 - Maine DEP, WH2P-00029, 1,2 State

Section II (E): The Chemical Manufacturers Association (CMA) proposes to exempt solid wastes currently determined to be listed hazardous waste due to the derived from rule under three scenarios: (1) residues from the combustion of listed wastes, (2) leachate from land disposal of listed wastes, and (3) sludges from the biological treatment of listed wastes. These broad exemption proposals are flawed for the reasons provided below. Combustion of Listed Waste: There is a great deal of variability in combustion residues. While some organic compounds are effectively destroyed by the combustion process, other equally or more toxic byproducts (e.g. dioxins) can be produced. In addition, the combustion residues may contain metals at higher concentrations than in the original wastes. Accordingly, while the combustion byproducts may be physically and chemically dissimilar from the listed waste it is derived from, the byproducts have toxic properties which could cause environmental degradation. CMA proposes to exclude such waste from subtitle C regulation unless the wastes exhibit one or more hazardous waste characteristics. However, relying on the TC by itself fails to provide adequate protection of human health and the environment under these circumstances for a variety of reasons. First, not all metals of concern are covered by the TC. Second, the TC only measures potential risks via the groundwater pathway. It is not at all clear 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 were clearly hazardous. EPA states in 55 FR 11799 The regulatory levels for characteristics that have been established provide a high degree of certainty that wastes exceeding those regulatory levels would pose hazards to human health and the environment if improperly managed and therefore require regulation under subtitle C. Wastes that do not exhibit hazardous waste characteristics are not necessarily non-hazardous. Indeed, EPA is fully aware of these TC limitations, which is why it is developing a multipathway risk analysis to set derived from exit levels. For these reasons, the Department supports further exploration of an appropriate multi source listing for these wastes in lieu of exempting outright these derived from wastes.

CMA9 - Coalition of Responsible Waste Mgmt., WH2P-00045, 2,2 Other

EPA also requested comments on the Chemical Manufacturers Association (CMA) suggested exclusions. CRWI wishes to comment only on the suggestion that residues derived from the combustion of hazardous waste be considered a new point of generation. CRWI agrees with CMA that the resulting ash is neither physically or chemically similar to the original listed waste and should be evaluated on its own merits for characteristics of being a hazardous waste. However, we are concerned that the creation of a new multi-source listing code (similar to F039) may result in additional testing. CRWI does not see the merits of requiring a complete battery of tests on incinerator ash simply because it now has its own multi-source listing code. As long as facility operators can use knowledge of the constituents of the original waste to decide which tests are appropriate for each batch of ash, CRWI supports this concept. However, CRWI cannot support the development of a multi-source listing code if it will result in additional testing.

CMA9 - Pioneer Americas, WH2P-00036, 2,3 Industry

EPA is considering an alternative approach for addressing combustion residue by listing these derived-from wastes under their own multi-source listing code. However, EPA completely misunderstands the greatest unnecessary burden on the regulated community by proposing to continue to regulate the residue as a listed hazardous waste. EPA's own BDAT for most organic hazardous wastes is combustion of the wastes, which destroys the organic constituents for which the waste was listed. This residue, when no longer containing the constituents for which it was listed, and when not exhibiting any other hazardous characteristic, should not be burdened with yet more requirements to be handled as a listed hazardous waste. Application of other requirements ... tailored to fit the physical and chemical properties of these wastes would still not relieve the generator of the costly and unnecessary requirement to handle the residue as hazardous.

CMA9 - DoD, WH2P-00017, 5,1 Federal Govt.

ISSUE 2: Multi-Source Combustion Residue Listing Comment. DoD supports the development of a single waste code for combustion residues originating from the treatment of hazardous wastes. Discussion. EPA has been considering a possible approach for addressing combustion residues, which would list these derived-from wastes under their own multi-source listing code, similar to multi-source leachate (F039). When a generator sends hazardous waste to an incinerator for treatment, a single generator's waste is often commingled with other generator's waste and fed into the incinerator. The resultant residue carries the waste codes from all wastes fed into the incinerator under the derived-from rule. To specifically carry all these waste codes through and attach them to the residue provides little benefit. In fact it would potentially be an administrative burden to accurately depict all codes. The current required practice provides little benefit since the addition of one listed waste to the waste to be treated will cause all residue to become listed waste. Recommendation. Develop a single waste code for combustion residues originating from the treatment of hazardous wastes. In addition, we would recommend 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 characteristic. Reference. 64 FR 63387, left-hand column

CMA8 & CMA9 - ETC, WH2P-00034, 2,4 Waste Mgmt. Assn.

[...] The option of exempting all residues from the combustion of listed hazardous wastes from RCRA is not supportable. EPA's upcoming approach for addressing combustion residues through a multi-source listing code and tailored regulatory requirements, particularly testing and analytical requirements, is much preferable. As EPA points out, combustion residues often contain concentrations of heavy metals that warrant further treatment and Subtitle C disposal. The alternative option does not address how LDR treatment standards would apply to these residues. Even if the combustion residues were fully subject to LDR treatment, the ETC strongly believes that Subtitle C management and disposal are necessary to ensure public health and environmental protection. In lieu of the CMA option, we look forward to the agency's proposal of a multi-source listing code and tailored testing and analysis requirements (e.g., the use of surrogate analytes).

CMA9- Envirocare of Utah, Inc., WH2P-00011, 4,3 Waste Mgmt. Co.

COMMENTS TO ENUMERATED ISSUES The following comments correspond to selected enumerated issues (i.e., Issues 1, 3-7, 9-22, 24, 26-35, 37, 39-40) for which comments were solicited in Section XXVI of the Proposed Rules. 1. What are merits and drawbacks of the five possible revisions to the mixture and derived-from rules submitted to EPA by CMA? Specifically, what are (a) the potential risks to human health and the environment, (b) any special or unique technical considerations, and (c) the economic effects of each of the possible revisions? (Section II.E) Comment: CMA's five possible revisions to the mixture rule included residue (ash) from combustion or incineration of listed hazardous waste. Residue (ash) from combustion of a listed hazardous waste is a newly generated waste. Envirocare believes 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. The following should be considered as constituents reasonably expected to be present in the waste: *Compounds generated in combustion side reactions e.g., dioxins and furans *Constituents in incinerated waste *Metals concentrated in ash Envirocare notes that there is 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. As part of this rulemaking, EPA should clarify the status of this waste as different standards are being applied, even within EPA.

CMA9 - Onyx Env. Services, WH2P-00015, 5,3 Waste Mgmt. Co.

Other Related Comments. OES does not believe that EPA's approach to addressing combustion residues by listing derived from wastes under their own multi-source listing code would provide significant relief from the current over-regulation of derived from wastes. Use of a multi-source listing code may reduce LDR required paperwork, but would provide little relief from the subtitle C requirements. Under this approach, the combustion residues would remain hazardous with no option to exit subtitle C regulation. In addition, the multi-source listing code may increase the regulatory burden by requiring combustion facilities to perform additional analysis to verify compliance with LDR standards for all constituents listed under the new code. This proposal would provide little or no economic relief, while providing no greater protection to human health and the environment.

CMA10

Mixed Waste Incinerators have Special Concerns Associated with Sampling, Testing, and Handling Mixed Waste Combustion Residues

CMA10 - DOE, WH2P-00007, 3,3 Federal Govt.

II. What Is EPA Proposing Today and on What Other Actions Is EPA Seeking Comment? II.E. What Other Regulatory Options Have Been Received From EPA Stakeholders? 1. p. 63386, col. 3 - 63387, col. 1 – 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.

CMA11

General Comments on Expanding the De minimis Exemption to F and K listed Wastes

CMA11 - Safety-Kleen, WH2P-00019, 2,2 Industry

One of the types of waste CMA proposes to include in the expanded exemption is "rinsate from empty containers or from containers that are rendered empty by that rinsing." It is not clear from the preamble discussion what is meant by this. Rinsate from containers which held hazardous waste generally contain 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 may also 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 "de minimis" losses from the normal handling of hazardous waste. This issue must be clarified further before any exemption can be considered.

CMA11 - Reusable Industrial Packaging Assn., WH2P-00037, 1,2 Industry Assn.

RIPA suggests a point of clarification with regards to the agency's request for comment on the RCRA Subtitle C proposals made by the Chemical Manufacturers Association (CMA) and included in the proposed Hazardous Waste Identification Rule (64 Fed. Reg. 63381; Nov. 19, 1999). Among other things, CMA is suggesting that de minimis losses of hazardous wastes be exempt from regulation as are de minimis losses of product or intermediate production materials. Examples offered of such losses include rinsate from empty containers or from containers that are rendered empty by that rinsing. While RIPA offers no comment on whether the rinsates should be exempt, we believe it should be specified that any exemption need only address the acute hazardous wastes, most of which are the P-listed wastes. Only containers for the acute hazardous wastes must be triple-rinsed to be RCRA-empty. Containers for other listed wastes are rendered RCRA-empty by practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating (40 CFR 261.7). Containers that must be triple-rinsed present special problems for reconditioners. CMA's proposal does not identify adequately the wastes for which the exemption would operate. Were the agency to decide against CMA's suggestion, it should be careful to avoid any confusion and state that the triple-rinsing requirement still applies only to containers for the acute hazardous wastes.

CMA11 - General Electric, WH2P-00005, 15,1 Industry

Proposal 5: EPA should expand the current de minimis exemption to include F and K listed wastes. Application of the mixture rule means that even small quantities of listed hazardous wastes that are mixed with non-hazardous wastewaters or other materials can cause the wastewaters or materials to become hazardous wastes. The de minimis exemption was created to ensure that very small losses resulting from the normal handling of commercial chemical products (from which the losses become P and U listed wastes) did not result in imposition of hazardous waste handling requirements on facilities' industrial non-hazardous wastewater treatment systems. GE believes that this exemption could be beneficially extended to cover the same types of 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. On occasion it is necessary to transfer F or K listed wastes from a satellite accumulation unit to a 90-day storage area and some minimal loss could occur and/or other accidental losses could occur that would be addressed with an expansion of the de minimis exemption. There is no reason to assume that a non-hazardous industrial wastewater treatment facility is 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. In fact, the constituents are the same. The vigorous enforcement of controls imposed on active management of hazardous waste by federal and state regulators and the substantial penalties for non-compliance would prevent the expansion of the de minimis exemption from encouraging mismanagement of the wastes newly added to the exemption.

CMA11 - Phillips Petroleum Co., WH2P-00014, 9,2 Industry

Proposal 5: EPA should expand the current de minimis exemption to include F and K listed wastes. Application of the mixture rule means that even small quantities of listed hazardous wastes that are mixed with non-hazardous wastewaters or other materials can cause the wastewaters or materials to become hazardous wastes. The de minimis exemption was created to ensure that very small losses resulting from the normal handling of commercial chemical products (from which the losses become P and U listed wastes) did not result in imposition of hazardous waste handling requirements on facilities' industrial non-hazardous wastewater treatment systems. Phillips believes that this exemption could be beneficially extended to cover 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. On occasion it is necessary to transfer F or K listed wastes from a satellite accumulation unit to a 90-day accumulation area and some minimal loss could occur and/or other accidental losses could occur that would be addressed with an expansion of the de minimis exemption. There is no reason to assume that a non-hazardous industrial wastewater treatment facility is 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. In fact, the constituents are the same. The vigorous enforcement of controls imposed on active management of hazardous waste by federal and state regulators and the substantial penalties for non-compliance would prevent the expansion of the de minimis exemption from encouraging mismanagement of the wastes newly added to the exemption.

CMA11 - DoD, WH2P-00017, 3,1 Federal Govt.

COMMENT 1c. Expansion of the "De minimis" Losses Exemption Comment. DoD supports the CMA recommendation to expand the "de minimis" losses exemption to include all listed hazardous wastes. Discussion. DoD supports CMA's position to expand the regulations in 40 CFR 261.3(a)(2)(iv)(D) to include small losses that occur during the normal handling of hazardous wastes listed in Subpart D. DoD does not typically manufacture significant quantities of commercial chemical products, but generates and handles significant quantities of F-listed hazardous wastes. "De minimis" losses of these wastes could occur during discharges from safety showers and eye wash stations, while cleaning personal protective equipment that has come in contact with these wastes, or while cleaning empty containers. Currently, those wastes must be

collected and handled as hazardous wastes unless it can be demonstrated that the discharge is in accordance with exemptions in 40 CFR 261.3(a)(2)(iv)(A) or (B). The expansion of the 261.3(a)(2)(iv)(D) exemption to other listed hazardous wastes would provide to military installations the same level of regulation as is currently applicable to manufacturing industries. EPA states in 64 FR 63387 that one rationale for the current "de minimis" exemption is that a facility has little economic incentive to allow spills, leaks, or other losses of commercial products. However, 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. Recommendation. Because EPA already requires the management of hazardous wastes in tanks and containers, DoD supports the expansion of the "de minimis" losses exemption to include all listed hazardous wastes. Reference. Request for comments 64 FR 63458, Section XXVI, Question #1 and 64 FR 63387, right-hand column through 63388, left-hand column; and 40 CFR 261.3(a)(2)(iv)(A) and (B).

CMA11 - Occidental Chemical Corp., WH2P-00046, 15,6 Industry
EPA Should Expand the Current De Minimis Exemption to include "F" and "K" Listed Wastes. Due to the "mixture rule," even small quantities of listed hazardous wastes that are mixed with non-hazardous wastewaters or other materials can cause the wastewaters or materials to become hazardous wastes. To avoid this result EPA promulgated an exemption for very small losses that result from normal handling of the commercial chemical products listed at 261.33 (acutely hazardous wastes, "P" wastes and toxic wastes, "U" wastes). 40 CFR 261.3(a)(2)(iv)(D). The de minimis exemption recognizes that small quantities of "P" and "U" listed wastes can be adequately and protectively managed as industrial non-hazardous waste. In the case of wastewater mixed with de minimis quantities of such wastes, the resultant wastewater mixture can be managed in a facility's industrial non-hazardous wastewater treatment system. See 46 Fed. Reg. 56582, 56584 (November 17, 1981). This provision, however, does not apply to de minimis losses from normal handling of "F" or "K" listed hazardous wastes. 261.31 and 32. As a result, de minimis quantities of such wastes, and wastewaters or other materials mixed with such wastes, are subjected to costly and unnecessary Subtitle C regulation. The additional costs provide no corresponding benefits of human health or environmental protection. OxyChem and OVLP recommend EPA expand the current de minimis exemption to apply to all listed wastes, not just "P" and "U" wastes. It is our belief that de minimis losses of listed wastes can be managed in nonhazardous wastewater treatment systems. By definition, these represent very small volumes of materials into systems designed to protect human health and the environment. For all the reasons presented above, expansion of the de minimis losses exemption is seen as a technical correction to help both plant operations and agency oversight with no adverse consequences to human health and the environment.

CMA11 - DaimlerChrysler, WH2P-00042, 2,1 Industry
II. E. Chemical Manufacturers Association (CMA) Recommendation DCC supports the proposal by the CMA to expand the de minimis losses exemption to include F and K wastes along with the P and U wastes already covered by the exemption. Absent such an exemption, these wastes are

subject to costly and unnecessary Subtitle C regulation with no corresponding environmental benefit. For the same reason the exemption has not led to indiscriminate management practices with respect to P and U wastes, and therefore, would not lead to such practices with respect to F and K wastes.

CMA11 - BP Amoco Chemicals, WH2P-00041, 2,3 Industry

EPA should expand the existing de minimis exemption to include small losses of listed waste during normal handling as suggested by CMA. As noted in CMA's proposed options, expansion of this exemption would not encourage mismanagement of listed waste given the regulatory description of de minimis and the existing RCRA tank, container and air emission standards.

CMA11 - CMA, WH2P-00033, 29,3 Industry Assn.

EPA Should Expand the Current De Minimis Exemption to Include F and K Listed Wastes. Due to the mixture rule, even small quantities of listed hazardous wastes that are mixed with non-hazardous wastewaters or other wastes can cause the wastewaters to become hazardous wastes. To avoid this result, EPA promulgated an exemption for very small losses that result from normal handling of the commercial chemical products listed at 261.33 (P and U wastes).¹ The de minimis exemption recognizes that small quantities of P and U listed wastes can be adequately and protectively managed as industrial non-hazardous waste. In the case of wastewater mixed with de minimis quantities of such wastes, the resultant wastewater mixture can be managed in a facility's industrial non-hazardous wastewater treatment system.² This provision, however, does not apply to de minimis losses from normal handling of F or K listed hazardous wastes.³ As a result, de minimis quantities of such wastes, and wastewaters or other materials mixed with such wastes, are subjected to costly and unnecessary Subtitle C regulation. The additional costs provide no corresponding benefits of human health or environmental protection. CMA recommends EPA expand the current exemption to apply to de minimis losses of all listed wastes, not just P and U wastes. It is CMA's belief that de minimis losses of all listed hazardous wastes can be protectively managed in wastewater treatment systems the discharge of which is subject to permit under the Clean Water Act. Based on the Agency's successful experience with the current de minimis exemption, CMA believes this recommendation can be promulgated as part of the April 30, 2001 final rule. a. Many Chemical Operations Segregate Their Hazardous and Non-Hazardous Wastewaters. The vast majority of wastes managed by the chemical industry are liquids, so any regulations or requirements addressing treatment and management of wastewater is of tremendous importance. Since management of the requirements, and associated costs, are significantly greater for hazardous wastewaters, facilities with only limited amounts of listed wastewaters will segregate their hazardous from non-hazardous wastewaters, frequently managing the non-hazardous wastewaters on site and sending the hazardous wastewaters off site. While this segregation system works for generated wastewater streams, the segregation of de minimis losses of listed hazardous wastes can be more challenging, since under the mixture rule, even small quantities of listed hazardous wastes that are mixed with non-hazardous wastewaters or other materials can cause the wastewaters or materials to become hazardous wastes. b. Chemical Manufacturing Operations Are Complex, Integrated Systems that May Generate Both Hazardous and Non-Hazardous Waste Streams. Chemical manufacturing facilities rarely produce only one product with only one waste

stream. Instead, large operations produce many products and grade of product and a variety of waste streams – both hazardous and non-hazardous. As described above, facilities segregate these waste streams. However, the physical complexity of the operations makes the segregation of de minimis losses of some of the hazardous waste streams challenging. For example: A batch plant operation has a fully segregated and permitted listed hazardous waste collection system, primarily for F-listed solvents, which are hard-piped to a permitted tank and sent off-site. The NPDES system is non-hazardous. Some of the listed waste piping is above grade over concrete in pipe bands with other pipes holding process materials and non-hazardous wastes. The concrete drains to the non-hazardous NPDES system. During routine maintenance of the hazardous waste piping system, minor piping drips and occasionally a minor spill may occur which the site recovers, characterizes and properly manages. These small losses would meet the RCRA regulatory description of de minimis and would not compromise the integrity of the NPDES permit, but must, nevertheless, remain segregated from the on-site wastewater treatment system. A complicated manufacturing unit has a number of distillation towers. One of these towers has a distillation bottom stream that is a K-listed waste. The K-listing occurred long after the unit had been constructed, and the unit is located in the midst of the manufacturing complex. Wastewaters from the operation as a whole (which contain Appendix VII hazardous constituents for which the K-waste waste listed) flow to a non-hazardous wastewater system designed to adequately manage and treat the wastewater. Pipes carrying wastes from the distillation tower generating the K waste must be identified, tagged, and separated from the non-hazardous wastewater system. As in the example above, it is unnecessary to keep de minimis losses from the K-generating tower separate. An organic chemical manufacturing plant produces a commercial chemical product that would be U-listed if discarded. Because of the large-scale nature of the manufacturing operation, large volumes are regularly produced of an off-specification material. This off-specification material can sometimes be sold into a direct manufacturing application exempt from RCRA. Because of the large volumes involved and the limited nature of the alternative outlet, sometime the off-specification material is disposed as a U-listed waste. When the off-specification is declared a waste, it must be segregated from the other material, collected and sent elsewhere for hazardous waste management. The off-specification material could easily be managed in the facility's wastewater treatment system without compromising the facility's water discharge permit, since waste from the on-specification product is already managed in the system. For facilities like those described above, 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 significantly ease RCRA compliance without compromising the integrity of the NPDES wastewater treatment system or protection of human health and the environment.

c. CMA's Recommendation Would Not Modify the Current Description of a De Minimis Losses. The current de minimis description describes de minimis losses to include: ...those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leads 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... (emphasis added)⁴ While this description is not, per se, a regulatory definition, it is clear that the exemption only applies to small drips and drabs of listed wastes. Nothing in CMA's recommendation would expand the current exemption; the exemption would remain limited to small low volume or

very dilute losses. d. Substantial Losses of F, K or Off-Specification P and U Wastes Would Continue to be Managed Under Other RCRA Regulations. EPA's concern over sloppy management of listed hazardous wastes should no longer be a basis for excluding F and K-listed wastes from the de minimis exemption. After 19 years of operations under the RCRA regulations, industry has demonstrated that large, significant and substantial losses of hazardous waste are not occurring into non-hazardous wastewater systems. Those facilities that manage listed wastes have already installed their separate management systems. Listed hazardous waste operations are subject to management standards for containers, tanks and air emissions. 40 C.F.R. Parts 264 and 265, Subparts I, J, BB and CC. These regulatory provisions ensure that listed wastes are secured within closed tanks and containers that are situated within secondary containment areas; the facilities have to be closely managed and regularly inspected; and records are required to be kept of operations. These regulations help to ensure good housekeeping and a record of that good housekeeping. As such, they represent another basis to believe that listed wastes are being carefully managed and will not enter nonhazardous wastewater systems in greater than de minimis amounts. e. Management of De Minimis Losses of F, K and Off-Specification P and U Wastes in a Non-Hazardous Wastewater Treatment System Would Be Protective of Human Health and the Environment. For almost twenty years, EPA's existing de minimis exemption has allowed P and U wastes to be managed in CWA systems. These systems cannot receive materials that could compromise their NPDES permits, yet have been successfully managing de minimis quantities of P and U wastes. EPA found CWA systems to be protective in 1981, and with the more rigorous requirements now in place (e.g., OCPSF effluent guidelines and biomonitoring requirements) such systems should be even more protective today. Because of the assurances that the quantities will be de minimis and the materials will be placed in an NPDES treatment system, it is reasonable to conclude that mixtures of wastewaters and de minimis quantities of F, K and P&U wastes will not pose a substantial hazard to human health or the environment. 1. 40 C.F.R. 261.3(a)(2)(iv)(D). 2. See 46 Fed. Reg. 56582, 56584 (November 17, 1981). 3. 261.31 and 32 4. 40 C.F.R. 261.3(a)(2)(iv)(D)

CMA11 - Ohio EPA, WH2P-00030, 3,3 State

3. Request for Comment: U.S. EPA requests comment on whether the de minimis rule (§261.3(a)(2)(iv)(D)) should be expanded to also exclude wastewater mixtures, containing small amounts of F and K code listed hazardous wastes due to spills or leaks from waste tank systems, containers, and other waste management equipment, that are treated at a facility subject to regulation under CWA. Comment Ohio EPA is generally supportive of expanding the scope of the de minimis rule to include small quantities of listed F and K code hazardous wastes except for one issue. We are hesitant to conclude that the definition of a de minimis loss should include rinsate from large hazardous waste containers (e.g. tanker trucks) that are rendered empty by the rinsing. We find the rational, as explained in the preamble to the original rule (Federal Register, Vol. 46, No. 221, page 56582, November 17, 1981) to be applicable to small losses of F and K listed hazardous wastes. Such management in a wastewater treatment system is appropriate, practicable, and economical. Wastewater treatment and pretreatment systems subject to regulation under CWA typically use chemical, physical and/or biological treatment processes capable of removing, reducing, and/or destroying hazardous constituents. Therefore, small quantities of hazardous wastes will be treated so they do not pose a substantial hazard to human health and the

environment. As mentioned above, we do not believe that rinsate, that renders a large container empty should be defined as 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.

CMA11 - Safety-Kleen, WH2P-00019, 1,2 Industry

1.0 Proposed CMA Revisions Safety-Kleen generally supports the expansion of the current exemption for "de minimis" losses resulting from manufacturing that was suggested by CMA. This change would also exempt small losses from the normal handling of all listed hazardous waste from the mixture rule. We believe that this change has merit, especially for small spills from the loading and unloading or transfer of waste materials and for minor leaks from process equipment such as pumps, valves and pipes. Under the current "mixture rule" these types of small spills can result in the creation of large quantities of extremely dilute hazardous waste when they occur in secondary containment areas that subsequently accumulate rainwater. Because of the "mixture rule" this rainwater would be considered hazardous waste and would have to carry the same waste codes as the "spilled" waste even if the concentration of hazardous constituents is non-detectable. Even if the spill occurs before the rain event and is cleaned up, there is the question of how much residual waste remains on the surface of the containment structure. To be safe, hazardous waste generators and TSD facilities routinely classify and manage the water as hazardous waste. In addition to increasing operating cost for these facilities, we believe that this application of the "mixture rule" over-inflates the reported quantity of hazardous waste generated by the regulated community and can hamper waste minimization efforts. Safety-Kleen urges caution, however, in how the Agency would apply the exemption to spills of this nature. The types of spills associated with most transfer operations are generally quite small, usually less than 1 gallon per occurrence. If the exemption is left open ended, however, it is quite possible that it could be abused to exempt large spills which occur during loading and transfer operations. During many waste loading and unloading operations residual material remains in the hoses used to transfer waste from tank trucks or railcars into tanks or large containers. Depending upon its length, up to 10 gallons of waste may remain in the hose. If the change to the exemption is left open-ended as the language recommended by CMA suggests, the operator conducting the transfer could simply "spill" the residual into secondary containment and this material would not be considered hazardous waste. We recommend that facilities wishing to take advantage of this exemption be required to develop and implement written Best Management Practices for all loading, unloading and transfer operations which are designed to minimize spills and prevent abuse of the exemption. BMP would be maintained as part of the facility operating record.

CMA11 - CA Dept. of Toxic Substances Control, WH2P-00009, 2,4 State

CMA also proposes to expand the exemption for "de minimis" losses to all listed hazardous wastes (instead of only commercial chemical products). They believe that tank, container and air emission management standards will encourage safe management of these wastes. DTSC fears there might be an incentive for generators to spill/leak listed wastes if those wastes are eligible for

an exemption. As we understand it, the reason the exemption exists for commercial chemical products is that companies typically ensure that raw materials/products are handled in a manner which would minimize losses, as these materials/products are valuable. We do not believe that companies would necessarily take the same amount of care to prevent losses of listed wastes, if those wastes were exempt from Subtitle C.

CMA11 - ETC, WH2P-00034, 3, 4 Waste Mgmt. Assn.

Finally, the option of expanding the current exemption for de minimis losses that result from the manufacture of commercial chemical products to include such losses from the management of all listed hazardous wastes is inadvisable. The rationale given is that a facility has little economic incentive to allow spills, leaks or other losses. 64 Fed. Reg. at 63,387, col. 3. While this may be true for some responsible facilities, particularly generators that are ISO certified, the RCRA management standards are important to set a regulatory floor for all facilities. In addition, the RCRA tank and container standards do encourage safe management, but if spills, leaks, and other losses of listed hazardous wastes were exempt from RCRA, the important incentive of compliance with these regulatory standards would be diminished.

CMA11 - Maine DEP, WH2P-00029, 3,1 State

Expansion of a Current Exemption for De Minimus Losses: The underlying rationale for the current exception is there is a significant financial incentive to properly manage commercial chemical products/intermediates as they are valuable commodities. There is no similar value for hazardous waste. The described waste streams, e.g. leaks from pipes, waste storage tanks or containers, or rinsate from containers, are unwanted by the chemical manufacturers. The wastes often have no value and in fact are a liability. The generator's principal incentive to properly manage these discharges is they are regulated as hazardous waste, and the generator could face enforcement action if they are not properly managed. The language proposed by CMA is overly broad e.g. One or more hazardous wastes listed in Subpart D and should be rejected by EPA. The de minimus losses exemption should remain limited to commercial chemical products/intermediates and not expanded. Based on years of experience responding to incidents involving these releases, keeping these wastes as hazardous acts as a partial deterrent for bad housekeeping. This deterrent should be maintained, contrary to CMA's proposal.

CMA11 - Independent Liquid Terminal Assn., WH2P-00027, 1,3 Industry Assn.

Ever since the inception of the definition of de minimis in the rule, it has been unfairly limited to the use of companies generating wastes from the manufacturing process. Excluded from the use of this rule are all other facilities that generate a waste, including bulk liquid storage terminals. Even if unintentional, the rule arbitrarily discriminates in favor of one type of operation. If, on the other hand, the discrimination in the rule by EPA is intentional, EPA has never 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. This discrimination and non-scientific arbitrariness is shown in other regulations whereby EPA deliberately redefined storage to mean process, and then asserted that

regulations that were promulgated for manufacturing process facilities also applied to stand-alone storage facilities. ILTA Recommendation: Therefore, ILTA suggests that EPA amend 40 CFR 261.3(a)(iv)(D) to eliminate the discriminatory application of *de minimis* and extend its application to all process facilities subject to the rule. The rule should be amended as follows (strike-through means delete a word or words; underlining means add a word or words.): (D) A discarded commercial chemical product, or chemical intermediate listed in §261.33, arising from *de minimis* losses of materials from manufacturing process operations in which these materials are used or handled as raw materials or are produced in the manufacturing process. For purposes of this paragraph (a)(2)(iv)(D), *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 rinstate (sic) rinstate from empty containers or from containers that are rendered empty by that rinsing; or”

CMA11 - SOCMA, WH2P-00035, 24,1

Industry Assn.

C. Option To Expand the De Minimis Loss Provision As a fifth option, CMA has put forward specific language for expanding the scope of the current *de minimis* loss provision set out in 40 C.F.R. §261.3(a)(2)(iv)(D). The current provision exempts from the mixture rule small losses of certain commercial chemical products listed in 40 C.F.R. § 261.33. Under the language set out in the Federal Register, CMA would seek to expand this option to cover *de minimis* losses of one or more hazardous wastes listed in Subpart D and would seek to expand the term *de minimis* losses to include losses from manufacturing and related operations which generate these wastes. This option received the broadest expression of interest from SOCMA’s members, although it became apparent the exact scope of the activities that would be covered would need further clarification. SOCMA would also like to offer one further modification to the proposal put forward by CMA. A number of SOCMA members indicated 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 losses from laboratories would not differ from those covered by the current exemption. Furthermore, the types of commercial chemical products being used and tested in the laboratory could also be ones expected to be amenable to effective treatment in an on-site wastewater treatment system. At present, significant time, effort and cost is involved in segregating and capturing these types of *de minimis* losses from on-site laboratories. SOCMA does not consider the distinction between laboratories and manufacturing operations meaningful in this context and recommends that EPA pursue a broadening of the exemption to address the recommendations offered by both SOCMA and CMA.

CMA11 - Onyx Env. Services, WH2P-00015, 7,1 Waste Mgmt. Co.

A. “De Minimis” Exemption. OES believes the CMA proposal has merit; however, there are certain key issues that must be addressed. OES believes that the current exemption does not contain specific enough detail to be useful when dealing with hazardous waste. OES believes the Agency must address the following issues: The Agency must define what constitutes a “de

minimis” loss of hazardous waste; The Agency must define what constitutes normal handling activities; and The Agency must address whether the exemption would apply during transportation. By addressing these issues the Agency will be providing clear guidance as to when the exemption applies.

CMA12
Relationship of LDRs to the CMA Proposal

CMA12- BP Amoco Oil, WH2P-00001, 3,1 Industry

[...] With regard to the applicability of LDR program issues, new point of generation and/or treatability group designations can be applied to these materials. The derived from materials would not have the characteristics of hazardous waste. The Agency could determine that meeting the LDR treatment standards for the original listed waste would also be required. Perusal of the delisting petitions which have been granted for specific wastes, however, indicates that the delisting exemptions have allowed for metal concentrations greater than UTS levels in some cases. While we have no data to support the following assertion, it is difficult to see that the additional volumes of these low-risk materials which will be disposed in Subtitle D landfills will represent any change in protection of human health and the environment. There is a significant volume of non-hazardous material already being disposed in such facilities which have constituent concentrations higher than those in these materials, e.g. materials which 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 mixture and derived from rules were first formulated.

CMA12 - Occidental Chemical Corp., WH2P-00046, 7,4 Industry

In Addition to the Exemptions Proposed, EPA Should Adopt in its Final Rule The Five Revisions to the Mixture and Derived-From Rules Recommended by CMA. LDR's Need Not be a Barrier to Adopting the Reforms Proposed. In some previous rulemakings EPA has taken the view that land disposal restrictions (LDRs) attach to hazardous wastes at the point of generation and continue to apply even if a waste ceases to be classified as hazardous, citing the D.C. Circuit's decision in *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C. Cir. 1992). If applied blindly in all cases, such a position would require wastes regulatorily exempted from the definition of hazardous waste or otherwise excluded or exempted from RCRA Subtitle C still being required to meet LDRs as though it were still a hazardous waste. Such an outcome would defeat much of the reason for the exclusions. There are cases, however, in which the Agency has modified this strict interpretation and either excluded requirements to meet LDRs or attached LDRs at a different point. Industry strongly believes that EPA should declare that LDRs do not apply to wastes that exit Subtitle C through promulgated regulations. LDRs need not apply at all to wastes when they exit under HWIR. In the Third Third rule, 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)." 55 Fed. Reg. 22652 (June 1, 1990). The Chem Waste decision upheld this conclusion as "a permissible construction of the statute." 976 F.2d at 14. Indeed, 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 is also exempt from the requirements of Part 268. Thus, the exclusions "override" the LDRs. This is the case even if the exclusion only attaches after the point of generation of the waste. A prominent example is the domestic sewage exclusion (261.4(a)(1)(ii)). For many wastes delisted under the current Section 260.22 program, their exclusions become applicable (and LDRs

cease to apply) after the point of generation. In the current LDR Regulations (268.1) EPA excludes characteristic wastes going to wastewater treatment systems that have been decharacterized before reaching land-based units or are considered de minimis losses. EPA has already used the "new point of generation" concept in the LDR clarification regulation published May 11, 1999. This rule discusses a new point of generation for sludges generated from treatment of high TOC ignitable wastes in NPDES tank [or POTW] systems. Section II of this regulation preamble reads as follows: On May 12, 1997, EPA published regulations promulgating certain aspects of the original LDR Phase IV proposal (60 FR 11702, March 2, 1995), including a discussion clarifying point of generation of hazardous wastes (see 60 FR 26006-7, May 12, 1997). That discussion may have been confusing with regard to the status of sludge from high-TOC ignitable waste treated in entirely tank-based NPDES or POTW discharge systems. To clarify, EPA's position is that where wastes are managed in NPDES or POTW discharge systems that are entirely tank-based, the wastes are not destined for land disposal and, therefore, neither the LDR disposal prohibitions nor the treatment standards (or attendant dilution prohibition) apply. Conversely, where an NPDES or POTW discharge system includes a land-based unit (i.e., a surface impoundment), wastes managed in the system are considered to be destined for land disposal and the LDR regulations do apply. See 61 FR 15566 at 15570 (April 8, 1996), 53 FR 31136 at 31149 (August 17, 1988). Accordingly, the management of a high-TOC ignitable waste in an entirely tank-based NPDES or POTW discharge system--whether inadvertent or not--would trigger no LDR requirements. Sludge subsequently removed from the tanks would be considered newly-generated waste (for LDR purposes) regardless of any changes in treatability group, and LDR requirements would apply with respect to its management only if the sludge itself is hazardous waste when removed. If the sludge is a hazardous waste, the LDR treatment standard that would apply would depend on the hazardous waste code and treatability group (or subcategory) of the sludge itself. (II. Clarification of the May 12, 1997 LDR Phase IV "Mini Rule" emphasis added) These examples show that EPA has made appropriate and logical decisions in the past about the LDR requirements. There is no precedent "requiring" LDR's to attach to delisted wastes. In fact, there is precedent and logic that would dictate that hazardous waste LDR requirements need not attach to wastes that are no longer considered hazardous.

CMA12 - CMA, WH2P-00033, 18,4 Industry Assn.

LDR's Need Not be a Barrier to Adopting the Reforms Proposed. In the preamble to the proposed rule, EPA notes that our suggestions to the Agency do not address how LDR treatment standards would apply to the excluded wastes.¹ The simple answer to the question is that LDR's would apply in the same way that they apply in current analogous exclusions: 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 which we propose to amend, 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 residues exhibited a characteristic of hazardous waste and are going to be land disposed, then it would be subject to the LDR program.² In some previous rulemakings EPA has taken the view that land disposal restrictions (LDRs) attach to hazardous wastes at the point of generation and continue to apply even if a waste ceases to be classified as hazardous, citing the D.C. Circuit's decision in *Chemical Waste Management v. EPA*.³ If applied blindly in all cases,

such a position would require wastes regulatorily exempted from the definition of hazardous waste or otherwise excluded or exempted from RCRA Subtitle C still being required to meet LDRs as though it were still a hazardous waste. Such an outcome would defeat much of the reason for the exclusions. There are cases, however, in which the Agency has modified this strict interpretation and either excluded requirements to meet LDRs or attached LDRs at a different point. Industry strongly believes that EPA should declare that LDRs do not apply to wastes that exit Subtitle C through promulgated regulations. LDRs need not apply at all to wastes when they exit under HWIR. In the Third-Third rule, 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)."⁴ The Chem Waste decision upheld this conclusion as "a permissible construction of the statute."⁵ Indeed, 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 C.F.R. §§ 261.2-261.6, then the waste is also exempt from the requirements of Part 268. Thus, the exclusions "override" the LDRs. This is the case even if the exclusion only attaches after the point of generation of the waste. A prominent example is the domestic sewage exclusion.⁶ For many wastes delisted under the current Section 260.22 program, their exclusions become applicable (and LDRs cease to apply) after the point of generation. In the current LDR regulations, EPA excludes from the LDR program wastes that are hazardous only because they exhibit a characteristic and have been decharacterized before reaching land-based wastewater treatment systems⁷ as well as de minimis losses of characteristic wastes.⁸ These examples show that EPA has made appropriate and logical decisions in the past about the LDR requirements. There is no precedent requiring LDR's to attach to delisted wastes. In fact, there is precedent and logic that would dictate that hazardous waste LDR requirements need not attach to wastes that are no longer considered hazardous. 1. 64 Fed. Reg. at 63,387. 2. See explanation of new point of generation concept as it applies to the LDR program at 64 Fed. Reg. 25,408 (May 11, 1999). 3. 976 F.2d 2 (D.C. Cir. 1992) 4. 55 Fed. Reg. 22652 (June 1, 1990). 5. 976 F.2d at 14. 6. 55 Fed. Reg. at 22,660. 7. 40 C.F.R. § 268.1(c)(4). 8. 40 C.F.R. § 268.1(e)(4).

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[...] Further, to address the Agency's comment that the proposal does not address LDR issues, OES believes that the 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.