

US EPA ARCHIVE DOCUMENT

DCN PH4P008
COMMENTS Florida DEP
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 008
COMMENT

The preamble only discusses surface impoundments. There is no discussion of other land disposal units such as spray fields or innovative treatment units such as created wetlands. Are artificial wetlands equivalent to waters of the United States or to surface impoundments? Where is the point of compliance with such units? Are septic tanks (Class V injection wells) considered CWA equivalent zero discharge treatment? EPA only addressed Class I injection wells in the Phase III proposal.

I believe EPA has underestimated the number of facilities managing decharacterized wastes in CWA land disposal systems. In addition, the number of these facilities that also have RCRA permits has been grossly overestimated. (42% pg. 43659) In most cases the "decharacterization" takes place within the pretreatment tanks, not before the waste is placed in the system. What management standards will apply to facilities that have hazardous constituents in their waste water that are not derived from "decharacterized" sources?

EPA need to add a discussion clarifying the relationship between §262.10 (b) and §261.5 (c). For example, Alcoa, a large quantity generator in Polk County Florida manufactures alumina out of a byproduct of phosphate manufacture. The waste water from this process is both corrosive and toxic due to arsenic. The waste water is discharged to a treatment tank system where it is batch treated with lime, which neutralizes the water and binds the arsenic so that the waste is no longer TC toxic when discharged to a surface impoundment. The waste water is not stored prior to treatment. It is stored briefly after treatment long enough for effluent testing purposes. LDRs do not appear to apply to this waste because it is not accumulated per §262.34 prior to treatment.. The site has arsenic contaminated ground water in excess of drinking water standards.

This proposal does not discuss WWTUs that have eliminated the discharge of waste water We have 2 enforcement cases in Florida that involve large petroleum terminals that have permitted spray evaporation systems for handling storm water and (D001/D018) petroleum contact water. The contact water passes through a simple oil/water separator, supposedly removing the ignitability

characteristic, prior to being diluted with storm water. Is this system treating a D001 waste or recycling a D001 waste and treating a D018 residual? At Chevron in Tampa, the diluted waste is sprayed on top of a large tank which has been painted black for evaporation. No secondary containment is provided. Overspray has been seen to occur, but it evaporates prior to hitting the ground. Amerada Hess in Jacksonville has a similar system, except that the tank containing the spray heads is a concrete sump. Soils around the sump are visibly stained from overspray. These systems are NPDES permitted zero discharge units. On at least one occasion in the last year, water collected from the sprayhead at the Chevron terminal in Tampa was still D018 waste. Amerada Hess has not tested their waste yet. Does the treatment standard apply at the sprayhead or at the point the spray reaches the ground? If it applies at the ground, there is no approved method to collect a sample of the effluent for volatile organic compound analysis.

Pg. 43673 Are sludges generated in up line pretreatment tanks and sumps going to be subject to the same standards as the proposed management standards for sludges removed from prebiological CWA surface impoundments?

The present definition of "sludge" is insufficient to distinguish it from "waste water." We have chronic problems with septic haulers who pump out waste water holding tanks for land application without regard to whether the tank holds sewage or industrial waste water. Several years ago EPA signed a national consent order with several major petroleum companies overdischarging floor wash water contaminated with hazardous waste to septic tanks. Not all the waste percolated into the ground. These tanks are periodically emptied of dirt and sludge by septic haulers. The sludges and waste waters are sometimes taken to a POTW, and sometime they are land applied after treatment to raise the pH above 12 for 2 hours. EPA should redefine some of the wastewater and sludge listings to clarify RCRA applicability, especially if standards are adopted that differentiate between primary, secondary and tertiary treatment. Otherwise the sludges from secondary treatment (as you define it) of electroplating waste waters might not be considered to be listed if the sludge is not characteristically hazardous. That would not accord with EPA's traditional interpretation!

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P015
COMMENTS BP Oil
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 015
COMMENT

An exemption from Phase III/IV LDR requirements is critically needed for wet weatherflow stormwater impoundments.

BP Oil has submitted previous comments on this issue in the Phase III Land Disposal Restriction (LDR) rulemaking (Comments to Docket No. F-95-PH3P-FFFFF, dated April 28, 1995) and is repeating them because of the critical nature of this issue for our facilities.

BP Oil currently has a wet weather flow stormwater pond at each of its two Midwestern refineries. These refineries, typical for facilities of their age, have "combined" sewers which receive stormwater combined with decharacterized process water during major storm events. We recently constructed large-capacity tanks to replace other surface impoundments at the refineries in order to meet primary sludge, Toxicity Characteristic (TC) waste, and Benzene Waste NESHAP requirements. The remaining combined-flow stormwater impoundments receive wet weather flow during major storm events only and are used infrequently. The replacement tank capacity precedes the impoundments. The impoundments receive flow only during storm events; therefore, they are not primary sludge (F037/F038) impoundments. The influent to the impoundments is not TC waste; the water and the sludges in the impoundments are not TC wastes.

At both refineries, any stormwater entering the impoundments is transferred to the aggressive biological treatment system for treatment prior to discharge. The transfer is made as soon as flow conditions permit, since water levels in the impoundments are kept low to provide needed capacity for the next storm event.

It makes little common sense to spend tens of millions of dollars to construct tanks to replace these impoundments that are used approximately once or twice per year and that represent very low risk to the environment. Space constraints for construction of additional tanks would be an issue at our refineries as well as the cost and problems of pumping the significant quantities of stormwater which must be managed during a storm event if a gravity-flow sewer system cannot be utilized. The cost of installing segregated sewer systems at these refineries is prohibitive. The existing stormwater impoundments provide needed flexibility for handling stormwater flows in a cost-effective

manner. Therefore, EPA should exempt wet weather flow impoundments from the Phase III and Phase IV rules because of the very low risks associated with these facilities and the very high costs of alternative means of stormwater management.

BP Oil supports proposed Option 1 - no additional requirements for non-hazardous surface impoundments under the Phase IV rules. The court's opinion (*Chemical Waste Management, Inc. v. EPA*, 976F.2d.2 (D.C. Cir. 1992), cert. denied 113 S. Ct. 1961(1993)) clearly indicates that Clean Water Act (CWA) nonhazardous surface impoundments can continue to be used to receive and treat decharacterized wastewater, provided that the waste is treated to RCRA standards. The court did not address potential risks associated with the impoundments themselves and assumed that they would continue to be used for treating decharacterized wastewater.

The proposed Phase III LDR rulemaking requirements would require that wastewaters meet Universal Treatment Standard (UTS) levels at the NPDES discharge point of the CWA system. This requirement is sufficient to meet the findings of the court, and no additional requirements addressing leaks, air emissions, and sludges for these non-hazardous impoundments are needed in the Phase IV rulemaking. Further, as we have supported in previous comments, we urge EPA to determine in the Phase III rulemaking that aggressive biological treatment (ABT) is the BDAT standard for decharacterized petroleum refinery wastewaters.

BP Oil agrees with EPA that proposed Option 3 is not legally or technically justified and that the costs of this option would far exceed benefits.

If Option 2 is selected in spite of the persuasive arguments for Option 1, BP Oil agrees with EPA that the rule should not address leak and sludge issues for biological and postbiological units. The activated sludge in aggressive biological treatment (ABT) impoundments is non-hazardous and meets Universal Treatment Standards (UTS). The American Petroleum Institute (API) submitted data in the Phase III rulemaking which demonstrate that these

levels are being met for organic constituents in petroleum refinery wastewaters and will be submitting additional data in Phase IV comments. In our comments on the Phase III rulemaking, BP Oil submitted toxicity Characteristic Leaching Procedure (TCLP) data on the activated sludge in the ABT impoundment at one of our refineries demonstrating that TCLP metal concentrations are less than UTS levels.

The influent water to biological and post-biological units is not hazardous, and the contents, both sludge and water, are not hazardous. ABT systems are well-mixed in order that biodegradation can take place. The concentration of constituents is consistent throughout the impoundment and generally represents effluent concentrations, e.g. levels less than UTS levels. Therefore, we agree with the Agency that the Phase IV rule need not address sludge and leak issues for biological and post-biological units.

Under Option 2 compliance with existing Clean Air Act (Benzene Waste NESHAP and Refinery MACT) requirements which are applicable to petroleum refineries should fulfill Phase IV air emission control requirements for refinery CWA non-hazardous surface impoundments.

Clean Air Act (CAA) requirements such as the Benzene Waste NESHAP (40CFR Part 61, Subpart FF), the New Source Performance Standards (NSPS) for Petroleum Refinery Wastewater (40CFR Part 60, Subpart QQQ), and the pending Refinery MACT requirements (59FR 36130, July 14, 1994) are applicable to non-hazardous surface impoundments at petroleum refineries, and duplicative air emission requirements under the RCRA program are unnecessary. The Agency should defer to the CAA regulations rather than issue overlapping rules under the RCRA regulatory program. The Agency should also make clear that if a refinery or facility is meeting requirements under a CAA standard, such as Benzene Waste NESHAP, the refinery is not subject to proposed requirements under Option 2, even if individual units are not required to be controlled by the CAA requirements or if the facility itself falls below the triggering levels of the CAA standard. We have submitted similar comments on this issue to the Agency concerning potential revisions to the Subpart CC rules (Docket No. F-95-CE3A-FFFFF, BP Oil comments dated October 10, 1995).

As a general comment, the expansion of the RCRA regulatory program to include air emission requirements has become very complex since the existing and potential RCRA air emission requirements overlap

with existing CAA requirements. As we have commented previously, air emissions are best regulated under CAA programs. If air emissions from hazardous waste treatment, storage, and disposal facilities are a threat to human health and the environment, the section 3004(n) provisions of RCRA are best addressed in CAA programs. We have now come to a situation where hazardous waste regulations are proposed to be applicable to nonhazardous wastes and facilities. Air emission requirements designed for permitted hazardous waste units (which are not applicable to non-hazardous facilities or wastewater treatment facilities under current Subpart CC rules) are now proposed to be applicable to non-hazardous wastes managed in some CWA treatment facilities, e.g. non-hazardous surface impoundments. This makes no common sense. The very low risks to human health and the environment represented by this rulemaking do not warrant the complexity that has developed.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P015
COMMENTS BP Oil
RESPONDER SS
SUBJECT EQUV
SUBJNUM 015
COMMENT

We support the concept of multi-unit groundwater monitoring and self-implementation by facilities subject to groundwater monitoring and corrective action under Phase IV requirements.

Preamble language (60 FR 43760) notes that under the municipal solid waste landfill regulations, section 258.51(b) allows approval of a multi-unit groundwater monitoring system rather than requiring separate groundwater monitoring systems for each unit and that multi-unit monitoring may be protective and less expensive to install and monitor for non-hazardous surface impoundments. BP Oil strongly supports such provisions.

Groundwater monitoring must be conducted under a number of RCRA program requirements including those for permitted and interim status units, post-closure requirements, and under RCRA corrective action requirements. Non-hazardous surface impoundments are classified as solid waste management units (SWMU's) under the corrective action program, and groundwater monitoring will likely be required for many of these units. In addition, state regulatory requirements may already require groundwater monitoring of non-hazardous impoundments.

The addition of more groundwater monitoring requirements under the Phase IV LDR rulemaking is unnecessary. The duplicative and overlapping requirements have already become technically difficult and very costly. For example, at one of our refineries we consistently obtain groundwater monitoring data showing low and "non-detect" levels of constituents for certain monitoring wells. The data continues to be obtained and reported to authorities quarter after quarter at substantial sampling and analytical costs with little apparent benefit or use. We are working to obtain relief for this situation under current requirements. Adding additional groundwater monitoring requirements in the Phase IV rulemaking only compounds the problem. Site-specific, technically-sound, cost-effective methods of obtaining needed data should be allowable, and multi-unit groundwater monitoring is an example of the flexible approach which is needed.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that

underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P017

COMMENTER Kodak

RESPONDER PMC

SUBJECT EQUV

SUBJNUM 017

COMMENT Kodak also has two other recommendations. We support EPA's reasoning that new regulation of surface impoundments is not necessary because threats to human health and the environment are already adequately minimized.

Existing Regulations Adequately Minimize Threat from Releases from Surface impoundments.

EPA has proposed three options for minimizing threat from releases from surface impoundments. We believe that current regulations already adequately minimize threat, so that Option 1 is the best choice and no additional regulations are needed. Mike Shapiro, Director of EPA's Office of Solid Waste, testified before the House Subcommittee on Commerce, Trade and Hazardous Materials, that the risks from the wastes regulated under the Phase III and Phase IV rules, "are small relative to the risks presented by other environmental conditions or situations . . .," indicating that EPA does not feel there are significant risks associated with the surface impoundments regulated under this rule.

RCRA § 1006 states, "Nothing in this Act shall be construed to apply to . . . any activity or substance which is subject to the Federal Water Pollution Control Act, . . . except to the extent that such application (or regulation) is not inconsistent with the requirements of such Acts." In the decision of the District of Columbia Circuit in *chemical Waste Management v. EPA* (the case requiring the promulgation of this rule) the court recognized that RCRA requires accommodation with the Clean Water Act (CWA) "to the maximum extent practicable." 976 F.2d at 23. Since Option 1 meets the minimize threat standard in RCRA § 3004(m), and it allows surface impoundments to continue to be regulated exclusively by the CWA, it is the best accommodation with the CWA.

Option 2 creates a whole new set of standards that may duplicate or even contradict other regulations. Air regulations that will cover surface impoundments are being set under the Clean Air Act (CAA). This includes New Source Performance Standards (NSPSs), National Emissions Standards for hazardous Air Pollutants (NESHAPs) (Part 61), and Maximum Achievable Control Technology (MACT) standards (Part 63), as well as federally approved state Hazardous Air Pollutant (HAP) programs and State Implementation Plans (SIPs) that address Volatile Organic Compounds (VOCs). Other potential releases are also controlled. For example at Kodak's surface impoundment in Colorado, the surface water discharges are regulated under the CWA, the sludge from the impoundment requires a state beneficial use permit for land application, and the surface impoundments have double wall liners with leak detection, and groundwater monitoring. Additionally, sludge from a non-hazardous surface impoundment would be regulated as a hazardous waste if it has hazardous characteristics, because the sludge is considered a new point of generation for listing determinations. If EPA promulgates any standards for surface impoundments as proposed in Option 2, we believe they should only apply in cases where there are no other federal or state standards. This would avoid duplicative recordkeeping and reporting and the potential for compliance with two standards that are inconsistent.

We oppose Option 3 that requires treatment of all Underlying Hazardous Constituents before entering the surface impoundment as excessive. As long as the treatment in the surface impoundment adequately minimizes threat, treatment before entering the surface impoundment is not necessary.

Recommendations

Because Option 1 is the least burdensome way to minimize threat from surface impoundment releases and the best accommodation with the CWA, Kodak recommends that EPA choose Option 1.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when

generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P018
COMMENTS Commenter Mobil Oil
RESPONDER SS
SUBJECT EQUV
SUBJNUM 018
COMMENT

EPA Should Forgo the Phase IV Rulemaking in its Entirety
In the preamble to the March 2, 1995 Phase III LDR proposal, EPA stated "...the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices during the next two years, although there are other actions and projects with which the Agency could provide greater protection of human health and the environment" and "In a time of limited resources, common sense dictates that we deal with higher risk activities first...", 60 Fed. Reg. 11704, col. 2. Moreover, in the President's April 16, 1995 Reinventing Environmental Regulation announcement, the Administration made a commitment to "refocus RCRA on high risk waste."

While Mobil understands that the Agency is bound by the schedule it agreed to in settlement of EDF v. Reilly, and as modified by the decision in Chemical Waste Management v. EPA, it is equally clear that the Agency retains considerable discretion in how it implements these requirements. In particular, nothing in the Chemical Waste Management v. EPA decision requires that the Agency promulgate standards for non-hazardous surface impoundments. Mobil urges EPA to forego the Phase IV rulemaking in its entirety (Option 1 of the Phase IV proposal) and rely on "other Agency programs to address these releases under current rules or future efforts." 60 FR 43659, col. 2.

Moreover, the Agency's objectives established for RCRA "Rifleshot" legislation, which would preclude the need to promulgate either the Phase III or Phase IV regulations, clearly indicate that the Agency is concerned that going beyond Option 1 would essentially subject these types of facilities to excessive and unnecessary regulation. At a minimum, EPA should make the land disposal restrictions in both Phases III and IV consistent with the environmental significance of the very limited risks associated with these activities, taking into consideration the potential high costs that could be involved. We certainly concur with EPA that we are "in a time of limited resources" and Common Sense dictates that we apply those resources where they will achieve the most benefit. The adoption of Option 1 would signify Common Sense.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P018
COMMENTS Commenter Mobil Oil
RESPONDER SS
SUBJECT EQUV
SUBJNUM 018
COMMENT

Mobil facilities routinely manage wastewaters that EPA describes as formerly hazardous, decharacterized wastewaters in CWA treatment systems, some of which have land based treatment units. Thus, Mobil has a significant interest in how EPA promulgates land disposal restrictions governing the management/treatment of such wastewaters.

EPA SHOULD FORGO THE PHASE IV RULEMAKING IN ITS ENTIRETY Mobil noted with interest EPA's comments in the Phase III preamble that stated "...the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices during the next two years, although there are other actions and projects with which the Agency could provide greater protection of human health and the environment" and "In a time of limited resources, common sense dictates that we deal with higher risk activities first...", 60 Fed. Reg. 11704, col. 2. Moreover, in the President's April 16, 1995 Reinventing Environmental Regulation announcement, the Administration made a commitment to "refocus RCRA on high risk waste." While Mobil understands that the Agency is bound by the schedule it agreed to in settlement of EDF v. Reilly, and as modified by the decision in Chemical Waste Management v. EPA, it is equally clear that the Agency retains considerable discretion in how it implements these requirements. In particular, nothing in the Chemical Waste Management v. EPA decision requires that the Agency promulgate standards for non-hazardous surface impoundments. Mobil urges EPA to forego the Phase IV rulemaking in its entirety (Option 1 of the Phase IV proposal) and rely on "other Agency programs to address these releases under current rules or future efforts." 60 FR 43659, col. 2. Moreover, the Agency's objectives established for RCRA "Rifleshot" legislation, which would preclude the need to promulgate either the Phase III or Phase IV regulations, clearly indicate that the Agency is concerned that going beyond Option 1 would essentially subject these types of facilities to excessive and unnecessary regulation. At a minimum, EPA should make the land disposal restrictions in both Phases III and IV CONSISTENT with the environmental significance of the very limited risks associated with these activities, taking into consideration the potential high

costs that could be involved. We certainly concur with EPA that we are "in a time of limited resources" and Common Sense dictates that we apply those resources where they will achieve the most benefit. The adoption of Option 1 would signify Common Sense.

RESPONSE:

In the proposed Phase IV rulemaking, published on August 22, 1996, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments (60 FR 43655). As discussed in the April 8, 1996 partial withdrawal notice to the LDR Phase III final rule (61 FR 15660), the *Land Disposal Program Flexibility Act of 1996*, signed by the President on March 26, 1996, provides that decharacterized wastewaters that are managed in surface impoundments regulated under the Clean Water Act (CWA) or CWA-equivalent systems are no longer prohibited from land disposal once rendered non-hazardous. The wastes addressed by the August 22, 1995 proposed rule (60 FR 43654), which are decharacterized before they enter impoundments, are no longer prohibited wastes under RCRA. Therefore, any cross-media transfer of hazardous constituents cannot be regulated under RCRA. For these reasons, the Agency is not finalizing any of the options discussed in Section I of the August 22, 1995 proposed rule.

DCN PH4P018
COMMENTS Commenter Mobil Oil
RESPONDER SS
SUBJECT EQUV
SUBJNUM 018
COMMENT

In addition, the EPA Office of Solid Waste, in its recent proposal regarding listing determinations for refining residuals, indicated that air exposure pathways were not modeled for residuals entering the refinery wastewater treatment system because "the Benzene NESHAP (55 FR 8292, March 7, 1990) [OSW probably intended to cite the Benzene Waste NESHAP which was modified and promulgated in its final form on January 7, 1993, rather than the Benzene NESHAP that covered benzene transfer operations] and the MACT standards (60 FR 43244, August 18, 1995) for volatile organics emissions were considered to be the pertinent regulatory mechanisms for potential air emission sources." Thus, in the current LDR Phase IV rulemaking, also under RCRA/OSW jurisdiction, the Agency should not find a need for any additional regulation of air emissions from land based refinery ABT units or other refinery wastewater surface impoundments.

RESPONSE:

In the proposed Phase IV rulemaking, published on August 22, 1996, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments (60 FR 43655). As discussed in the April 8, 1996 partial withdrawal notice to the LDR Phase III final rule (61 FR 15660), the *Land Disposal Program Flexibility Act of 1996*, signed by the President on March 26, 1996, provides that decharacterized wastewaters that are managed in surface impoundments regulated under the Clean Water Act (CWA) or CWA-equivalent systems are no longer prohibited from land disposal once rendered non-hazardous. The wastes addressed by the August 22, 1995 proposed rule (60 FR 43654), which are decharacterized before they enter impoundments, are no longer prohibited wastes under RCRA. Therefore, any cross-media transfer of hazardous constituents cannot be regulated under RCRA. For these reasons, the Agency is not finalizing any of the options discussed in Section I of the August 22, 1995 proposed rule.

DCN PH4P018
COMMENTS Commenter Mobil Oil
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 018
COMMENT

EPA Should Exempt Refinery Wet Weather Flow Impoundments from both Phase III and Phase IV LDRs

During storm events, combined refinery process wastewater and stormwater runoff above the capacity of the refinery wastewater treatment plant must be contained for later treatment during dry weather when there is excess wastewater treatment capacity. This process is necessary to avoid overwhelming the wastewater treatment plant during a storm event, resulting in inadequate oil recovery and biological treatment, with consequent possible failure to meet NPDES discharge limits. Many refineries, particularly those that are older, larger and/or in geographical regions which receive high average rainfalls, utilize land based impoundments to provide containment for wet weather flow. Land based wet weather flow impoundments are inherently low risk because:

They only receive and contain wet weather flow during a storm event and the subsequent period required to work-off the contained inventory through the wastewater treatment plant.

Wet weather flow is primarily stormwater and thus contains only low concentrations of UTS constituents. The UTS is only likely to be exceeded for a very short period of time early in a storm event when any hydrocarbon that is trapped in low spots in the sewer is reentrained by stormwater. Even then, facilities are in place to try to recover this hydrocarbon before it enters a land based unit.

The Agency recognized the legitimate need for such land based wet weather flow impoundments when it provided an exemption for such impoundments from the Primary Sludge Listing rule (55Fed. Reg. 46354, November 2, 1990). Alternatives to continued use of land based wet weather flow impoundments are very expensive and cannot be justified by the minimal risk reduction that would be achieved.

Mobil's other comments can be summarized as follows:

The Agency is not required to promulgate standards for non-hazardous surface impoundments and should not do so.

Phase IV issues for petroleum refiners represent low risk or are already adequately regulated.

- EPA has adequate data demonstrating that risks posed by sludges or leaks from refinery biotreatment impoundments are very low.
- Air emissions from CWA impoundments are adequately addressed

already by the Refinery Wastewater MACT provisions which invoke the existing Benzene Waste NESHAP. No other regulations are needed to

control emissions from refinery CWA impoundments.

EPA should not adopt Option 3 because it is not legally required, is bad environmental policy, and fails any reasonable standard of cost/benefit assessment.

Adoption of the "battery limits" jurisdictional approach (suggested in the Phase III proposal) offers an alternate approach that could accomplish the objectives of Option 1 and administratively accomplish EPA's Reinventing Environmental Regulation RCRA "Rifleshot" LDR legislation objectives.

PHASE IV ISSUES FOR PETROLEUM REFINERS REPRESENT LOW RISK OR ARE ALREADY ADEQUATELY REGULATED

In addition to not being required to impose additional controls on non-hazardous impoundments, the Agency can not justify such imposition based on the very limited risk reduction available, especially in view of the high cost involved. However, if the Agency erroneously decides to regulate non-hazardous surface impoundments, it should adopt Option 2.

Mobil concurs with EPA's Option 2 rationale that there is no need to impose controls on sludges that are deposited in land based aggressive biological treatment (ABT) units, because these sludges have received adequate treatment in the ABT unit. TCLP testing of such sludges verifies that they are non-hazardous and do not constitute a threat to groundwater due to leaching.

Similarly, Mobil also concurs with the Agency's Option 2 conclusion that there is no need to address the integrity of these low risk non-hazardous surface impoundments. Any leaks in land based ABT units constitute a very low risk because (1) ABT units are inherently well mixed, and (2) as API data provided the Agency indicates, refinery ABT units provide a level of treatment virtually equivalent to the UTS. Consequently, since ABTs are well mixed, any leak, even one near the inlet, will be made-up of water that has been treated to near UTS standards. Mobil also concurs with EPA's rationale that facilities already

subject to CAA 112 requirements do not need additional controls on air emissions from these low risk surface impoundments. Air emissions from refinery surface impoundments are already adequately regulated by the Petroleum Refining Wastewater MACT (which invokes the Benzene Waste NESHAP (BWN)) and/or NSPS standards. Background data used in the development of the BWN demonstrate very low volatilization of benzene in refinery ABT units and very thorough biological treatment of benzene and other organics. For this reason, the BWN offers one compliance option wherein the refinery ABT, in conjunction with sealing sewers, is the control device for removal and destruction of benzene. Most refiners with land based ABT units have opted to remove benzene (and other organics) at the source due to RCRA TC. Regardless of the BWN compliance option chosen, in its consideration of MACT requirements for Refinery Wastewater treatment, the Agency determined that the controls in place for BWN would also provide substantial control of other volatile organics, and imposed no new requirement.

EPA should clarify in the final Phase IV rule that compliance with the underlying standard (° 112 or NSPS) is sufficient to meet Phase IV air requirements, regardless of the specific manner chosen for compliance as allowed in the particular underlying standard.

If EPA decides to pursue the approach outlined as Option 2 in the preamble, specific regulatory language should be proposed for public review and comment before a final rule is promulgated.

EPA SHOULD NOT ADOPT OPTION 3

Mobil concurs with EPA's assessment that Option 3 is neither legally required nor good environmental policy. Mobil agrees with EPA that "impoundment based wastewater treatment systems can be effective means of treating decharacterized wastewaters, and can do so without undermining core values of RCRA and the LDR program." 60 FR 43677, col. 1. The Agency has received ample data from API that clearly supports this contention relative to such wastewater treatment systems at petroleum refineries. Mobil refineries participated in these data collection efforts.

The Agency clearly recognizes that a decision to impose more

severe regulation of sludge, leaks, or air emissions from land based ABT units would effectively preclude the use of land based ABT units that are providing UTS equivalent treatment. Replacement of such land based ABT systems with tankage based ABT systems would impose significant costs to construct the new tankage based system and close the land based unit. At one Mobil refinery where this option was evaluated, the capital cost associated with the new tankage based ABT system was estimated at \$20 million, with closure of the land based unit estimated to cost another \$5-10 million (depending on closure method). In the era of Common Sense and Reinventing Environmental Regulation, such costs can not be justified in view of the very minor risk reduction achieved. Any new requirements applied to non-hazardous surface impoundments should be subject to the four year retrofit provisions of RCRA section 3005(j)(6).

REFINERY WET WEATHER FLOW IMPOUNDMENTS SHOULD BE EXEMPT FROM PHASE

III & IV LDRs

During storm events, combined refinery process wastewater and stormwater runoff above the capacity of the refinery wastewater treatment plant must be contained for later treatment during dry weather when there is excess wastewater treatment capacity. This process is necessary to avoid overwhelming the wastewater treatment plant during a storm event, resulting in inadequate oil recovery and biological treatment, with consequent possible failure to meet NPDES discharge limits. The efficacy of the refinery land based ABT will be equally crucial to maintaining its performance relative to achieving UTS equivalency, and thus, a means of diverting combined process wastewater and stormwater (i.e. wet weather flow) during storm events must be maintained. Many refineries, particularly those that are older, larger and/or in geographical regions which receive high average rainfalls, utilize land based impoundments to provide containment for wet weather flow.

Land based wet weather flow impoundments are inherently low risk because:

- o They only receive and contain wet weather flow during a storm event and the subsequent period required to work-off the contained inventory through the wastewater treatment plant.
- o Wet weather flow is primarily stormwater and thus contains only

low concentrations of UTS CONSTITUENTS. The UTS is only likely to be exceeded for a very short period of time early in a storm event when any hydrocarbon that is trapped in low spots in the sewer is reentrained by stormwater. Even then, facilities are in place to try to recover this hydrocarbon before it enters a land based unit. In the event that some small quantity of hydrocarbon does evade recovery and enter the impoundment, procedures are in place to insure prompt removal. Consequently, the wet weather flow contained in the impoundment is a very dilute mixture. Although none of Mobil's wet weather flow impoundments are so permitted (one has an emergency discharge permit), many such impoundments are routinely permitted for direct discharge of what is predominantly stormwater. Because Mobil's wastewater treatment plants were designed to accommodate and work-off such wet weather volumes, and because Mobil has had considerable success in reducing its water use/treatment needs, Mobil has chosen to treat wet weather flow rather than seek a permit to discharge directly.

o The Agency recognized the legitimate need for such land based wet weather flow impoundments when it provided an exemption for such impoundments from the Primary Sludge Listing rule (55 Fed. Reg. 46354, November 2, 1990). In the preamble to that rule, the Agency states:

"In cases where stormwater cannot be collected in storm sewers(e.g., process sewers are used to collect stormwater), stormwater ponds are used to receive surge flow from the process sewers during storm events. Such facilities will route only wet weather flow(mixed process and stormwater) to these segregated ponds. Sludges generated from segregated stormwater ponds that do not receive dry weather flow (i.e., any process wastewaters or oily cooling wastewaters) are not included in today's listing." 55 Fed.Reg. 46363, col. 1.

ADOPTION OF THE "BATTERY LIMITS" JURISDICTIONAL APPROACH OFFERS AN ALTERNATE APPROACH THAT COULD ACCOMPLISH THE OBJECTIVES OF OPTION 1 AND ADMINISTRATIVELY ACCOMPLISH THE OBJECTIVES OF EPA'S PROPOSED RCRA "RIFLESHOT" LDR LEGISLATION

If a perfect refinery could be designed, built and operated, it would convert all crude oil to valuable products and not generate any wastes. Unfortunately, such perfection has not been achieved, nor is it likely. The inefficiency of various processing steps and equipment leaks result in small quantities of hydrocarbons which were intended to remain in the upgrading process being

inadvertently diverted to process sewers. These hydrocarbons are valuable and historically, even before the advent of environmental regulation, efforts were made to recover these hydrocarbons for reintroduction into the refining process to make petroleum products. Regulatory requirements (the BWN in particular) and pollution prevention incentives have combined to reduce the amount of hydrocarbons that inadvertently reach process sewers, but the basic economic drive toward recovery remains. Hence, efforts by the Agency to define these materials that inadvertently reach the sewer and are recovered in primary oil/water separators as wastes, or more specifically hazardous wastes, have been strenuously resisted by the refining industry. Within the context of RCRA, Mobil and other refiners contend that these materials are not discarded because they are recovered and reprocessed as a part of the refining process. Hence, if they are not discarded, they are not wastes and cannot be hazardous wastes. Mobil and other refiners continue to contend that the point at which discard of wastewater occurs, and hence RCRA jurisdiction begins, is after oil recovery (i.e., wastewaters exiting primary treatment, either the oil/water separator or dissolved air flotation unit).

While Mobil continues to recommend the foregoing position, it is recognized that the Agency has not yet accepted this position. However, in its Phase III proposal EPA outlined and seemed to be willing to consider a "battery limits" alternative suggested by CMA. The "battery limits" approach defines a "point of rejection" where aqueous streams are aggregated for the purposes of determining whether wastes are prohibited from land management. The concept would allow combining a battery of processes involved in production of a related group of products for consideration as a single manufacturing step. Such aggregation need not be considered impermissible dilution because it is "part of the normal process that results in the waste." S. Rep. No. 284, 98th Cong. 1st sess. 17. The Agency's expressed concern that it might be difficult to define "battery limit" boundaries would not logically apply to petroleum refineries. If refinery products can be viewed as "a group of related products" and refinery processes viewed as "a single manufacturing step", the "point of rejection" of such an aggregation would be the outlet of the primary oil/water separation step, where refinery wastewater typically enters the secondary treatment process (usually ABT). Mobil recommends that EPA at least adopt the CMA proposal if it is unable to accept the more general solid waste definition jurisdictional argument in this

case. Such an interpretation would accomplish the objectives of Option 1, as well as the intentions of EPA's proposed RCRA "Rifleshot" legislation on LDRs, while avoiding solid waste definition issues.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P019
COMMENTS ASARCO Inc.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 019
COMMENT

Asarco is concerned with EPA's proposed imposition of management controls under RCRA pertaining to decharacterized wastes and, in particular, characteristic hazardous wastes that have been deactivated through dilution as proposed in Options 2 and 3. Asarco is also concerned with EPA's proposal to replace LDR standards for land disposal of toxicity characteristic ("TC") metal wastes from Toxicity Characteristic Leaching Procedure ("TCLP") levels to Universal Treatment Standards ("UTS") levels. At the outset, Asarco wishes to make clear that this Proposed Rule cannot and must not encompass "surface impoundments," such as tailings ponds, that are excluded from RCRA Subtitle C jurisdiction pursuant to the Bevill Amendment. These units are excluded even though they may involve the co-management of mining and mineral processing wastes (e.g., alkaline tailings and acid plant blowdown). EPA analyzed these circumstances in its 1985 Report to Congress on Extraction and Beneficiation Wastes and determined that RCRA Subtitle C regulations are not warranted. Regulation of such impoundments is beyond EPA's RCRA jurisdiction, and EPA should ensure this rulemaking adequately distinguishes Bevill-excluded impoundment units. Furthermore, EPA should make clear that any Phase IV LDR proposals that may affect non-Bevill mineral processing wastes are outside the scope of this Proposed Rule and will be addressed in the upcoming supplemental rule.

Asarco also endorses the comments of the National Mining Association and the Lead Industries Association regarding this Proposed Rule and incorporates them herein by reference. Asarco is a member of both organizations.

Proposed Management Controls for Subtitle D Surface Impoundments That Receive Decharacterized Wastes

In this Proposed Rule, EPA considers three options to control potential cross media releases from surface impoundments that receive decharacterized wastes containing underlying hazardous constituents ("UHCs") above UTS.

Option 1 is the most effective and appropriate method by which potential cross-media releases from RCRA Subtitle D surface

impoundments should be controlled.

Asarco supports Option 1, which would appropriately rely on existing EPA and state programs to address risks posed by potential cross-media releases from surface impoundments containing decharacterized wastes, and would not require EPA to issue LDR requirements. Asarco supports EPA's position in the Proposed Rule that the United States Circuit Court of Appeals for the District of Columbia circuit in *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C. Cir.1992), cert. denied 113 S.Ct. 1961 (1993) (hereinafter referred to as the "Third Third Opinion"), does not require the Agency to go beyond the Phase III rule to ensure that "removal of UHCs occurs to the same extent in [Clean Water Act ("CWA")] impoundment-based treatment systems as it does in conventional RCRA treatment systems." 60 Fed. Reg.43659. Moreover, as EPA recognizes in its Proposed Rule, existing or forthcoming regulatory mechanisms are sufficient to prevent impoundments from acting as "conduits for extensive cross-media transfers of untreated hazardous constituents" *Id.* An example is the Arizona Aquifer Protection Act. This Act requires that new and existing "surface impoundments, including holding, storage, settling, treatment or disposal pits, ponds and lagoons" be designed, constructed and operated to: (1) insure the greatest degree of discharge reduction achievable through application of the best available demonstrated control technology; and (2) prohibit discharge of pollutants from causing or contributing to a violation of aquifer water quality standards at the applicable point of compliance. All groundwater in the state is classified as drinking water and must be protected to narrative and numeric drinking water standards.

Under Option 2, EPA would create an entirely new, complex system of treatment standards and management controls concerning sludges, air emissions, and leaks for wastes that are no longer hazardous wastes. This would unnecessarily impose burdensome standards on Subtitle D surface impoundments receiving decharacterized waste. As discussed above, existing EPA and state programs are sufficient to control any potential cross-media releases from such impoundments. EPA's RCRA Subtitle C jurisdiction is limited to "hazardous wastes," as defined by Section 1004(5) of the Act, which EPA acknowledges with regard to imposition of controls on sludges from Subtitle D facilities. 42 U.S.C. § 6903(5). Nevertheless, in its

discussion of Option 2, EPA repeatedly states its intention to impose management controls on "nonhazardous wastewater treatment systems that accept decharacterized waste." See, e.g., 60 Fed. Reg. 43663, 43673. However, even assuming EPA's interpretation of the Third Third Opinion is correct with regard to this Proposed Rule, EPA must justify the need for any management controls based on threats to human health and the environment posed by the remaining UHCs present in a decharacterized waste stream. EPA has not done so in this Proposed Rule. EPA has previously stated that the "characteristic approach does not bring wastes into the Subtitle C system which do not present a substantial present or potential hazard to human health or the environment." 55 Fed. Reg. 11798, 11805 (March 29, 1990). Thus, any attempt to regulate a waste that does not pose a threat to human health and the environment, such as that proposed by EPA in Option 2, is not justified and, therefore is inappropriate.

EPA proposes in Option 2 to apply sludge and leak controls only to surface impoundments in which equalization or settling occurs. The mere fact that settling occurs in Subtitle D or CWA-regulated surface impoundments does not mean that any risk exists. For instance, if the decharacterized waste is placed in a pond to settle out solids so that the water can be reused, the UHC may be an organic that will typically not settle. In that case, the sludge would not contain the UHC, and management controls for land disposal of the sludge would not be necessary. The need for such management controls is not uniform. This approach fails to consider site- or facility-specific factors. EPA's arbitrary assumptions regarding the need for these standards could easily result in over-regulation of non-hazardous materials. While EPA correctly proposes to apply sludge management standards only when sludges are removed from a surface impoundment, EPA's arbitrary distinction unnecessarily imposes a significant regulatory burden. This is a burden that is especially unwarranted in light of the fact that existing or future regulations are sufficient to control any potential cross media releases from all three types of Subtitle D and CWA-regulated impoundments. EPA itself recognizes that the proposed management controls for sludges are unnecessary, acknowledging that no treatment of sludges would even satisfy the equivalency standard pronounced in the Third Third Opinion. As EPA correctly notes in its Proposed Rule, "literal application of an equivalence test would result in no

treatment of these sludges [removed from Subtitle D surface impoundments], since the sludges will be non-hazardous by definition (they cannot be hazardous wastes because they are being generated in Subtitle D surface impoundments), and so would not

require further treatment under the standard Subtitle C approach." 60 Fed. Reg. 43673. Asarco concurs with EPA's assessment and believes there should be no management standards under Subtitle C for land disposal of sludges removed from Subtitle D facilities.

With regard to Option 2 management controls for leaks, EPA would unnecessarily require annual sampling of decharacterized wastewaters in the impoundments to determine if regulated constituents are present at an arbitrarily established trigger level of ten times the Maximum Contaminant Level ("MCL"), regardless of whether a leak from an impoundment has been detected. EPA would require such annual sampling for as long as the unit is receiving decharacterized waste, despite the adequacy of the existing regulatory controls under the CWA, despite the fact that the waste is nonhazardous and despite the fact that state groundwater protection programs may regulate surface impoundments to minimize risks to human health and the environment. Asarco believes such a requirement is unnecessary and burdensome. In fact, such sampling is more burdensome than the counterpart Subtitle C requirements for active surface impoundments. Moreover, in light of the non-hazardous status of the decharacterized waste, this requirement is not justified and is inappropriate.

Option 2 also includes proposed management standards for air emissions from surface impoundments receiving decharacterized waste. Such management controls are unnecessary, as there may be only very limited potential for hazardous air emissions. This limited potential is already adequately addressed by existing controls that are imposed under the Clean Air Act, such as those pertaining to criteria pollutants and the National Emissions Standards for Hazardous Air Pollutants.

Asarco supports EPA's position that Option 3, which would require that decharacterized wastes meet UTS before entering surface impoundments, is unreasonably burdensome and unwarranted. Asarco agrees that this proposal would undermine the utility of impoundment-based treatment systems as effective treatment units

for decharacterized wastewaters. Moreover, in order to fulfill the requirements proposed in Option 3, facilities nationwide would be forced to incur great expense and disrupt necessary and effective wastewater treatment programs. This, in and of itself, would make a proposal that is purportedly aimed to protect human health and the environment counterproductive. Asarco also believes that Option 3 would unnecessarily impose requirements where there is already little or no risk.

In addition, EPA correctly recognizes in its Proposed Rule that RCRA requires some "accommodation" with the CWA regarding impoundment-based treatment systems. 60 Fed. Reg. 43677. Because Option 3 would override any potential for such an accommodation, this proposal is beyond EPA's authority and should be abandoned.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P019
COMMENTS ASARCO INC.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 019
COMMENT

Proposed Management Controls for Subtitle D Surface Impoundments That Receive
Decharacterized Wastes

In this Proposed Rule, EPA considers three options to control potential cross media releases from surface impoundments that receive decharacterized wastes containing underlying hazardous constituents ("UHCs") above UTS.

Option 1 is the most effective and appropriate method by which potential cross-media releases from RCRA Subtitle D surface impoundments should be controlled.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P020
COMMENTS EXXON COMPANY USA
RESPONDER HM
SUBJECT EQUV
SUBJNUM 020
COMMENT

3. The point of generation where LDRs attach should be at the point of wastewater discard

Notwithstanding Exxon's support of Option 1 (no additional controls), the point of generation remains a significant outstanding issue from the Phase III LDR proposal. It is unfortunate that it is not resolved at this point since it has the potential to significantly affect applicability of this rule to petroleum refineries. Through API, Exxon continues to challenge EPA's definition of the point of generation for wastewaters. Exxon has joined with other API members and filed a petition for review of the July 28, 1994 Final rule on the Definition of Solid Waste in Petroleum Refineries. Exxon repeats its assertion that wastewater is not a waste until it is discarded. The point of discard occurs downstream of the last unit that recovers valuable product from wastewater, namely the oil-water separator. This is the most logical definition of discard in a petroleum refinery and should be the point of generation where LDRs attach.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P020
COMMENTS Commenter Exxon
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 020
COMMENT

D. De Minimis exemptions for characteristic wastewaters should be expanded

To avoid triggering extensive requirements for low risk facilities, EPA should adopt a de minimis exemption for characteristic wastewaters. This exemption should be in the form of aheadworks-type exclusion for characteristic wastewaters whose volume comprises less than 1% of the total flow sent to CWA systems. The condition that UHCs not exceed ten times the UTS levels should be dropped from the Phase IV LDR proposal since the total volume of the streams is so small that the relationship between the UHC level and the UTS level is unimportant. This new exemption would recognize the minimal risk to health and the environment from de minimis streams and not mandate unnecessary investment.

RESPONSE

The Agency is retaining the de minimis exemption previously promulgated at 40 CFR 268.1(e)(4). In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

DCN PH4P020
COMMENTS EXXON COMPANY USA
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 020
COMMENT

The lack of regulatory language describing the three control options in the Phase IV LDR proposal is a matter of great concern to Exxon. Before promulgation of a Phase IV LDR rule, EPA should make regulatory language available for notice and comment in the Federal Register.

The overviews provided for each of the options in the preamble generate many unresolved questions that can only be understood in the context of regulatory language. EPA has provided flowcharts for some of the Option 2 proposals; however, it is a very difficult task to translate these flowcharts into regulatory language. Exxon offers two examples where confusion exists due to the lack of regulatory language. First, there are no specific criteria or definitions given on the different types of surface impoundments potentially subject to control (e.g., primary, secondary, tertiary, pre-biological, biological and post-biological). Second, the details of how surface impoundments are exempted from air emission controls if a facility is subject to a Clean Air Act (CAA) standard are vaguely described. In a petroleum refinery, for example, as many as 21 CAA standards may apply including New Source Performance Standards (40 CFR Part 60), National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) and National Emission Standards for Hazardous Air Pollutant Source Categories (40 CFR Part 63 or MACTs). If a petroleum refinery or marketing terminal is subject to one of these standards, is that sufficient to preclude the Clean Water Act (CWA) Surface impoundments at that facility from Phase IV LDR controls? Do surface impoundment controls need to be specifically addressed in the CAA standard before an exemption is allowed? Will there be any demonstrations required in order to claim an exemption from controls? These and many other questions make it critical that EPA propose regulatory language for notice and comment.

A. Clarify that facilities subject to MACT standards that address wastewater are not subject to surface impoundment air emission controls

The exemption from surface impoundment air emission controls was not clear in the Phase IV LDR preamble, due in large part to the

absence of regulatory language in the rule. EPA should clarify that facilities that are an "affected source" per 40 CFR Part 63 and that are subject to wastewater standards resulting from 40 CFR Part 63 MACTs are not required to install surface impoundment air emission controls. EPA should clarify that the exclusion applies if the sources are simply subject to the rule. EPA should clarify that any method of compliance with a MACT (e.g., technology-based standards, de minimis thresholds, deferral to other Clean Air Act rules such as the BWN) provides sufficient control and precludes the need for Phase IV LDR requirements.

B. EPA should expand the Option 2 exemption to Subtitle C Interim Status Surface Impoundments

In Figure 1 on 60 FR 43622, EPA identifies an exemption from Option 2 controls for ". . . surface impoundments located at a RCRA Subtitle C Permitted TSDF". Since Surface impoundments located at RCRA Subtitle C Interim Status TSDFs are subject to the same construction requirements (i.e., double liners with leachate collection) as impoundment sat Permitted TSDFs, there is no reason to limit the exclusion to Permitted TSDFs.

Exxon strongly supports EPA's selection of Option 1 (no additional controls) for the Phase IV LDR. Existing regulations and low risk from CWA impoundments managing decharacterized wastes provide sufficient protection of health and the environment. Additionally, the Third Third decision does not require EPA to promulgate additional controls.

A. The Third Third decision does not require surface impoundment emission controls

One of the most compelling reasons to support Option 1 is that the Third Third decision does not require additional requirements for surface impoundments receiving de-characterized waste. Exxon supports API's analysis of the legal reasons why the Third Third decision does not require controls for surface impoundments managing decharacterized wastewaters. Given the lowcost benefit of this rule, EPA should exercise maximum discretion and promulgate a rule with minimal additional requirements.

B. Petroleum refinery water quality has improved significantly as a result of recent rulemakings

Another important reason not to regulate Clean Water Act (CWA) surface impoundments further is that three rulemakings have significantly improved the quality of petroleum refinery wastewater

and stormwater in the last five years. Additional controls from the Phase IV LDR rulemaking are not needed. The Toxicity Characteristic (TC) rule promulgated on March 25, 1990 resulted in reductions in the level of benzene in refinery wastewater and stormwater. The Primary Sludge Listing promulgated on November 2, 1990 required Exxon and others to perform one-time sludge removal from refinery impoundments and convert them to non-hazardous service under Delay of Closure provisions at 40 CFR 265.113.d-e. In 1994, Exxon's refineries in Baton Rouge, Louisiana and Baytown, Texas removed more than 100,000 Tons of sludge in order to meet Delay of Closure requirements. As part of this conversion to non-hazardous service, many wastewater streams were rerouted away from the stormwater impoundment. The effect of the rerouting was to improve stormwater quality and reduce the risk from stormwater impoundment releases. Finally, the National Emission Standard for Benzene Waste Operations (BWON) promulgated on January 17, 1993 resulted in segregation and treatment of benzene-containing wastewater throughout refineries and petrochemical plants. In the process of complying with these three rules, most other organic compounds that occur with benzene (such as toluene and xylene) in wastewater and stormwater were controlled. Any historic "picture" EPA has of the risks posed by wastewater, stormwater and the units managing these streams is outdated unless it takes into account the improvements achieved by the TC, Primary Sludge and BWON rules.

C. State Subtitle D and Federal spill rules provide another layer of environmental protection

States already regulate subtitle D wastewater and stormwater impoundments wherever they feel regulation is appropriate. Federal regulations promulgated by the Phase IV LDR rule would be in addition to state requirements.

Existing EPA rules for management of spills address both routine and non-routine releases of Underlying Hazardous Constituents (UHCs) into CWA systems. EPA should not promulgate Phase IV LDR controls in order to mitigate spills. "Toxic pollutants" (many of which are UHCs) are defined for CWA systems and are regulated at 40 CFR 122.42 and 401.15. Additionally, CERCLA reporting requirements at 40 CFR 302.6 require reporting of many UHCs if they exceed the reportable quantity designated by the regulation.

The following comments provide a detailed rationale for why stormwater Surface impoundments should not be regulated under the Phase IV LDR. The comments below are equally applicable to

regulation of stormwater impoundments under the Phase III LDR proposed rule.

A. Description of stormwater impoundments at Exxon's refineries and co-located petrochemical plants

Exxon utilizes common sewer systems for conveyance of both process wastewater and stormwater at each of its four refineries (two of which have large co-located petrochemical plants operated by Exxon Chemical Americas that send wastewater and stormwater to the refinery). At Exxon's Montana refinery, annual rainfall is low enough that stormwater impoundments are not required. Other Exxon refineries in Louisiana, Texas and California have large stormwater impoundments that intermittently store stormwater mixed with decharacterized process wastewater.

1. Stormwater surface impoundments receive decharacterized process wastewater

During dry weather, Exxon's refineries and co-located petrochemical plants manage decharacterized process wastewater in their Aggressive Biological Treatment (ABT) units. Decharacterized process wastewater results from the aggregation of small streams of characteristically hazardous wastewater (generally with low levels of benzene) with numerous streams of non-hazardous wastewater. During rain events, this decharacterized process wastewater stream is further aggregated with stormwater and managed in stormwater impoundments (except at Exxon's Montana refinery, as noted above). With these layers of aggregation, both the concentration and mass loadings of UHCs become even lower and the influent to the stormwater impoundment is generally below Universal Treatment Standards (UTS).

2. Stormwater impoundment management strategy calls for impoundments to be empty whenever possible

Because the objective of the stormwater impoundments is to receive rainfall, Exxon operates them at minimum levels whenever possible. As soon as a rain event ends, the clean stormwater is either directly discharged under a CWA permit or processed through the biological wastewater treatment system.

3. Stormwater generally meets CWA discharge permit parameters without additional biotreatment

The stormwater quality is generally good because of the low concentrations and minimal mass loadings of UHCs in the decharacterized process wastewater. The low UHC concentrations result because only a fraction of the stormwater was decharacterized process wastewater and only a fraction of the decharacterized process wastewater was formerly hazardous. The

formerly hazardous process wastewater usually contains nominal levels of benzene only. Stormwater normally meets CWA discharge permit parameters without any additional biotreatment. This gives the facility the option to directly discharge the stormwater if it meets CWA discharge permit limits or to process the stormwater through the wastewater treatment plant.

4. Summary table of Exxon's impoundment management systems
The table below summarizes key factors about Exxon's stormwater and wastewater impoundment management systems. Exxon owns and operates approximately 45 acres of stormwater impoundments, 18 acres of ABT impoundments and 400 acres of biological impoundments downstream of ABTs.

Table III.A.4 - Exxon's Refinery Surface Impoundment Management
TABLE NOT REPEATED HERE, SEE ORIGINAL COMMENT.

The purpose of this section is to present several reasons why stormwater impoundments are unique when compared to other types of impoundments. The uniqueness of stormwater impoundments reduces their risk to health and the environment and decreases the need for additional controls such as liners or leachate collection systems.

1. Water and sludge quality have improved significantly as a result of the Toxicity Characteristic (TC) rule, Primary Sludge Listing and the BWON

As a result of three significant regulations promulgated in the last five years, the quality of refinery and/or co-located petrochemical stormwater and wastewater has improved significantly. EPA's historical level of concern about stormwater Surface impoundments should be lowered as a result of these regulations. These three regulations are the Toxicity Characteristic (TC) rule, Primary Sludge Listing and the BWON. These regulations have significantly reduced the risk to health and the environment from surface impoundments. Additional controls on Surface impoundments, wastewater or wastewater sludges are neither necessary nor cost-effective.

2. Size of stormwater impoundments

As noted in Table III.A.4 above, Exxon has 45 acres of stormwater impoundments at its four refineries and two co-located petrochemical plants. The sheer size of the impoundments makes any regulation requiring additional controls very costly.

After considering the minimal risk from these impoundments, Exxon urges EPA to not promulgate any additional controls for them.

3. Stormwater impoundments provide surge protection for wastewater

treatment plants and ensure efficacy of biological treatment units. In three of the four Exxon refineries, stormwater impoundments are absolutely necessary in order to operate biological wastewater treatment systems in compliance with CWA permits. Exxon supports EPA's position that stormwater impoundments are important equalizers that are required to maintain the efficacy of biological treatment systems. See 60 FR 11718 on March 2, 1995. Without the stormwater impoundments, large rainfall events would flush biomass out of the wastewater treatment system and reduce the treatment plant's efficiency. Additionally, rapid flushing of biomass from a wastewater treating plant due to the addition of stormwater could compromise a facility's ability to comply with CWA

permit parameters such as Total Suspended Solids (TSS) and Biological Oxygen Demand (BOD).

4. Stormwater impoundments are generally empty so the residence time of UHCs in the impoundments is short. As seen in Table III.A.4, Exxon's stormwater impoundments are generally at minimum levels in order to be available to receive stormwater. Since the impoundments are generally empty, there is no driving force in the form of a liquid level to leach hazardous constituents out of the stormwater impoundment sludge into the groundwater. Additionally, the water is either discharged or biologically treated shortly after being stored in the stormwater impoundment so UHCs have little chance of migrating. The intermittent use of a stormwater surface impoundment provides an excellent rationale for their exemption from any Phase IV LDR leak or sludge management standards. Finally, as seen in Table III.A.4, natural clay liners beneath Exxon's stormwater surface impoundments provide an added level of protection against groundwater contamination.

5. Decharacterized process wastewater constitutes a fraction of the total stormwater and is predominantly non-oily. In the Primary Sludge Listing, EPA provided general information for typical refinery wastewater streams that do not include oil. These streams include cooling water, steam turbine water, boiler blowdown, stripped wastewater and water treatment plant filter backwash. The Exxon Baytown, Texas Complex has estimated, for example, that non-oily wastewaters from these sources constitute over 70% of their daily average flow process wastewater flow. The decharacterized process wastewater results from aggregation of small streams of characteristically hazardous wastewater with

numerous non-hazardous wastewater streams. During rain events, decharacterized process wastewater is further aggregated with stormwater and managed in stormwater impoundments. With these layers of aggregation, the resulting stormwater influent is generally below UTS and the mass loadings of hazardous constituents entering the impoundment are minimal.

Exxon has selected RCRA Subtitle C Delay of Closure as its compliance option for surface impoundments in Baton Rouge, Louisiana and Baytown, Texas. Extensive groundwater monitoring requirements including semi-annual sampling are required up gradient and down gradient of these impoundments. In order to provide some data on the quality of water in these impoundments, we have summarized the two most recent groundwater sampling events at the Baytown, Texas facility for the largest stormwater impoundment below:

- Number of down gradient groundwater wells: 26
- Number of constituent analyses: 2,164
- Number of detectable constituent analyses: 3
(equivalent to 0.14% of the total constituent analyses)

Details of three sample analyses with detectable levels of constituents summarized below:

Constituent	Measured Value	Units	UTS Level	Comparison of Measured Value to UTS
Benzene	0.002	mg/L	0.14	Measured value 70 times lower than UTS
Lead	0.01	mg/L	0.69	Measured value 69 times lower than UTS
Toluene	0.004	mg/L	0.08	Measured value 20 times lower than UTS

As evidenced by the data above, there is no concern with levels of UHCs in the groundwater beneath this stormwater impoundment. The very large number of non-detects and comparisons to UTS are typical of the groundwater beneath Exxon's Delay of Closure impoundments.

6. Stormwater impoundment influent exceed UTS for only short periods, if at all

The ratio of process wastewater to stormwater is largest during the first few minutes of a rain event. It is during this brief period that the concentration of UHCs is typically highest and might temporarily exceed UTS at the inlet to the stormwater impoundment. Exxon's Baton Rouge, Louisiana Complex and Baytown, Texas Complex sample their stormwater impoundment inlet every two hours during a rain event for benzene. The results generally show the first sample exceeding the UTS level of 0.14 mg/L for benzene

with subsequent samples below the 0.14 mg/L UTS level. A composite benzene sample taken every two hours throughout the storm is also below the UTS level. Exxon's California refinery also samples its stormwater impoundment inlet every two hours and does not generally exceed the benzene UTS level for any period of time. Aggregation of the process wastewater with stormwater quickly lowers the concentrations of UHCs below their UTS levels. Certainly, a brief excursion above the UTS levels in the first few moments of a rain event, when considered against backdrop that the stormwater impoundments are generally empty and prohibitively expensive to replace, does not warrant any type of additional controls for the impoundments.

Exxon has a total of eight impoundments that are regulated under the RCRA Subtitle C Program as a result of either the TC rule or the Primary Sludge Listing. Five of these impoundments manage stormwater and three are ABTs. For each of the eight impoundments, Exxon has chosen the Delay of Closure compliance option outlined in 40 CFR 265.113.d-e. To comply with Delay of Closure, Exxon has removed hazardous wastewaters and hazardous sludges from these surface impoundments to the extent practicable. In addition, the impoundments have been converted to non-hazardous service in order to allow their continued operation.

Exxon realizes that the Third Third opinion appears to allow continued use of only subtitle D impoundments that treat non-hazardous wastewaters. Presumably, this is because the court was not familiar with the Delay of Closure provisions. Nevertheless, Exxon encourages EPA to recognize that an impoundment operating under RCRA Subtitle C Delay of Closure provides a higher level of health and environmental protection than a Subtitle D impoundment. The stringent groundwater monitoring, closure and post-closure care requirements stipulated in 40 CFR Part 265 Subpart G provide protection over and above Subtitle D standards. Exxon requests that surface impoundments operating under Subtitle C Delay of Closure be exempted from additional controls promulgated during the Phase IV LDR.

8. EPA recognized the unique nature of stormwater mixed with process wastewater during the Primary Sludge Listing. Special consideration of stormwater impoundments intermittently managing low levels of process wastewater is not precedent-setting for EPA. In the Primary Sludge Listing, stormwater impoundments receiving predominantly stormwater were exempted from the listing

definition.

The Agency agrees with the commenters that stormwater units that receive process wastewaters in this manner [from sewer systems where stormwater and process wastewater are co-mingled], and do not receive any process wastewaters or oily cooling wastewaters during dry weather flow, do not routinely generate sludges that are similar in composition to the primary treatment sludges subject to today's listings. 55 FR 46374 on November 2,1990.

The same logic should be used to exempt stormwater impoundments from additional controls under the Phase IV LDR.

Exxon believes that these impoundments should not be regulated under the Phase IV LDR. The analysis below demonstrates that there are no cost effective alternatives to these impoundments.

Replacing stormwater surface impoundments with tanks or retrofitting them to Minimum Technological Requirements (MTR) is prohibitively expensive and might not be feasible. Alternatively, segregation of decharacterized process wastewater from stormwater generally requires a completely new sewer system that is also prohibitively expensive to retrofit into an existing refinery and/or co-located petrochemical plant. Recognizing these large costs and the minimal risk, EPA should allow continued use of stormwater impoundments and not promulgate additional stormwater impoundment controls in the Phase IV LDR.

1. Replacement of stormwater impoundments is not cost effective or feasible

In 1992, API employed a contractor to estimate the costs for closure of Surface impoundments and their subsequent replacement with tanks. Unit cost factors generic to the petroleum refining industry for stormwater impoundment replacement were estimated by the contractor. Exxon has taken these generic unit cost factors and estimated a one-time cost of \$70 M and ongoing costs of \$4 M/year for the next30 years to replace the Exxon refinery stormwater impoundments with tanks. These costs do not include the large pumps required to transport stormwater or the independent power supplies necessary to make the large pumps available during a power outage. These costs are prohibitive considering the low risk of stormwater impoundments. The costs are summarized in Table III.C.1 below.

Table III.C.1 - Costs to Close Exxon's Refinery Stormwater Impoundments as Landfills and Subsequent Replacement with Tanks
 Description
 Unit Cost(Rounded)1

Acreage of Exxon Impoundments

Total Cost(Rounded)¹

Landfill Closure (One-time)

750 k\$/Acre

45

\$35 M

Tank Replacement (One-time)

750 k\$/Acre

45

\$35 M

Total Costs (One-time)

\$70 M

Tank operations and maintenance, groundwater monitoring, post closure care(Ongoing for 30 years)

85 k\$/Acre/Year

45

\$4 M/yr

1 k=1,000 and M=1,000,000a. Real estate limitations could exist In the event stormwater impoundments are required to be replaced and/or closed, there will be an interim period when real estate must be available for both the new tanks and the existing impoundments. The refinery must continue to have an outlet for its stormwater during the period of impoundment closure and replacement. This additional real estate requirement will be difficult to overcome. At each Exxon facility where the Phase IV LDRs might require stormwater impoundments to be replaced, new tanks would consume substantial plot space. The Gulf Coast refineries are surrounded by neighborhoods and the likelihood of increasing the refinery acreage is low.

2. Segregation of decharacterized process wastewater from stormwater is not cost effective

The previously characteristic wastewater streams that produce decharacterized process wastewater contain low levels of TC constituents (generally benzene). The characteristic streams generally have low flowrates but are located throughout a refinery and/or co-located petrochemical plant. They cannot be easily or cheaply segregated from other non-hazardous wastewaters or from stormwater.

On the basis of publicly available cost information from other refineries, Exxon would estimate a cost in excess of \$400 Million for segregation of decharacterized process wastewater from stormwater for our four refineries and two co-located

petrochemical plants. Imposing such large costs to address minimal risks is not reasonable. Additionally, costs of this magnitude seriously threaten the economic viability of these facilities and jeopardize their continued operation. Because of the aggressive nature of biological treatment in an ABT unit, it is unlikely that segregation would measurably improve the quality of water being discharged.

In summary, there is no reasonable alternative to the continued operation of stormwater impoundments. Because neither stormwater impoundment replacement with tanks nor segregation of wastewater from stormwater is cost effective, EPA should not promulgate Phase IV LDRs that mandate additional controls.

IV. EPA should designate Aggressive Biological Treatment units (ABTs) as "Best Demonstrated Available Technology" (BDAT) for process wastewater from refineries and co-located petrochemical plants

Exxon encourages EPA to carefully consider API's comments on this matter. By choosing ABT as BDAT for refinery and petrochemical wastewaters, EPA would adopt a cost-effective and proven technology that meets UTS while minimizing analytical difficulties and monitoring burdens. The combination of ABTs and downstream biological impoundments provides long residence times of wastewater in treatment units, low cost, ease of operation and is more cost effective than tanks in identical service. The CWA permits at refineries and co-located petrochemical plants are already protective of health and the environment largely as a result of the efficiency of these wastewater treatment units.

Designation of ABTs as BDAT helps EPA meet its obligation under RCRA Section 1006(b) to integrate RCRA and CWA requirements.

A. If ABT is designated, the Phase IV LDR compliance point should be moved

Assuming EPA designates ABT as BDAT for refinery and petrochemical wastewaters, facilities should have the ability to move their Phase IV LDR compliance point to the ABT unit inlet. EPA should provide this flexibility in the final Phase IV LDR.

A. If EPA determines that additional surface impoundment controls are required, a four year compliance period should be provided. If EPA decides in the Phase IV LDR that surface impoundments managing decharacterized wastes require additional controls, the full four year compliance period provided in RCRA section 3005(j) should be available. Arguably, since the potential surface

impoundment controls are on non-RCRA impoundments (and therefore not subject to RCRA), EPA can set the compliance period to any length of time. The four year period should begin with the promulgation of the Phase IV LDR. EPA has already determined that RCRA section 3005(j)(6) provides four years for retrofit or closure of impoundments not meeting MTR. 57 FR 37218-22 on August 18, 1992. The entire four year period to install the new controls on a surface impoundment will be required by Exxon given the magnitude, expense and technical difficulty of the task.

B. Option 2 groundwater and corrective action management standards should allow a site's qualified groundwater scientist the flexibility to select multi-unit or individual unit groundwater monitoring systems in the event groundwater monitoring of a surface impoundment is required, site specifics require the flexibility to select either an individual unit or multi-unit groundwater monitoring system. Exxon supports EPA's position that the qualified groundwater scientist should have authority to make this selection. There are instances where surface impoundments are closely spaced and the addition of wells between the units to create individual systems adds no value to an up gradient/down gradient analysis. Conversely, there are instances where "interferences" exist between surface impoundments (such as public water bodies, old Solid Waste Management Units or other contaminated property) and the ability to separately delineate the units is essential.

C. EPA should expand the list of corrective action measures to include continued use of surface impoundments under certain conditions

If a release from a surface impoundment is validated, EPA only allows two options according to 60 FR 43672. First, the decharacterized wastestream can be rerouted to a tank. Second, the surface impoundment can be retrofitted with a double liner and leachate collection. Both of these options can be prohibitively expensive and unnecessary.

Containment and removal/treatment of the groundwater should be acceptable as alternative means to allow continued use of an impoundment. Containment mechanisms such as generation of a cone of depression to collect and treat the contaminated groundwater or installation of a slurry wall around an impoundment provide adequate control of contaminated groundwater and do not force expensive tankage or double liner/leachate collection expenditures.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P020
COMMENTS EXXON COMPANY USA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 020
COMMENT

B. EPA should not modify the treatability group doctrine
In the Phase IV LDR preamble, EPA appears to assert that the treatability group doctrine does not need to be modified as a result of the Third Third decision by stating that the court likewise did not see that hazardous constituents in deposited sludges must be treated. The court in fact did not speak to the principle stated by EPA in the Third Third rule that generation of a new treatability group is considered to be a new point of generation and thus a new point for determining whether a waste is prohibited. 55 FR at 22661-662. Under this principle, unchallenged in the litigation, wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, notwithstanding that they may derive from prohibited wastewaters. 60 FR 43656 on August 22, 1995.

However, after supporting the treatability group doctrine in these early pages of the Phase IV LDR preamble, EPA overrides the doctrine when describing the Option 2 sludge management standards. If the concentration level of one or more of the UHCs exceeds UTS, then the sludge must be treated by means other than dilution to meet UTS. 60 FR 43675 and Figure 4: Option 2 at 60 FR 43674 on August 22, 1995.

Rather than the trigger for sludge treatment being the TC levels (as would be the case if the treatability group doctrine was followed), EPA has designated UTS levels as the threshold for requiring LDR treatment standards for sludges. Exxon encourages EPA to reconsider this position and maintain the treatability group doctrine. Let characteristic waste testing determine if LDR standards apply. EPA recognizes its option to maintain the doctrine.

EPA also reiterates that, as a legal matter, it can be argued that even no treatment of sludges is equivalent to Subtitle C LDR controls. This is because generation of sludges is usually a new point of generation at which the newly-generated waste is reevaluated to determine if it is subject to the LDR standards. If non-hazardous, the sludges would not be so subject (i.e., would not be prohibited wastes). 60 FR 43673 on August 22, 1995.

RESPONSE:

At this time, EPA is not modifying the treatability group doctrine. Wastewater treatment sludges that do not exhibit a characteristic of hazardous waste are not prohibited wastes. The sludges are a newly-generated waste. The newly generated waste must be evaluated independently for a determination of regulatory status.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P020
COMMENTS EXXON COMPANY USA
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COMMENT

VI. Critical Phase III LDR proposed rule issues should be considered as part of the Phase IV LDR

A. Aggregation of process wastewater is part of refinery and petrochemical processes and should not be considered "RCRA impermissible dilution"

Exxon recommends that EPA carefully examine the historical definition of impermissible dilution in light of the uniqueness of wastewater collection and conveyance systems. If EPA attaches LDRs at multiple points in a facility's wastewater collection system, the result might be that aggregation constitutes impermissible dilution. This position might drive the facility to costly and unnecessary point source segregation.

EPA should recall that many of its RCRA LDR requirements were established for waste management practices other than continuous flow wastewater systems. However, in wastewater systems the distinction between "aggregation" for the purposes of treatment and "dilution" for the purposes of meeting UTS is unclear. Before the RCRA statute even existed, industry aggregated wastewater for the purposes of treatment; therefore, aggregation was not a methodology developed by industry to bypass RCRA standards. To clarify this issue, Exxon recommends that 40 CFR 268.3.b be reinstated to read, "AGGREGATION of wastes that are hazardous because they exhibit a characteristic only, in a treatment system which treats wastes. . . pursuant to a permit issued under. . . the Clean Water Act (CWA). . . is not impermissible dilution."

1. Exxon agrees that the CWA has sufficient protection against dilution. Exxon supports EPA's statements in the preamble to the Phase III

LDR such as EPA also believes that there are adequate constraints in the CWA implementing rules to prevent these end-of-pipe standards from being achieved by means of dilution. 60 FR 11711 on March 2, 1995.

CWA permit writers have the authority to consider excessive levels of water use when setting discharge permit parameters including protection against dilution. This authority should be sufficient protection to preclude additional Phase III or Phase IV LDR requirements relating to dilution.

2. Exxon agrees that aggregation is not for the purposes of dilution, but for the purposes of treatment

If EPA defines points of generation for decharacterized process wastewater far upstream in a wastewater conveyance system, expensive and unjustified point source segregation could result. Exxon supports the Phase III LDR preamble language that . . .where residues are generated within a unit process, it might be possible to view these streams as still within the normal part of the process that results in the waste. . .and consequently that any routine combination of these streams from the common process would not be impermissible dilution. 60 FR 11716 on March 2, 1995. Again EPA says such aggregation could. . .be considered to be "part of the normal process that results in the waste." 60 FR 11716 on March 2, 1995. Because of the level of treatment provided by ABTs, it is unlikely that segregation to avoid impermissible dilution would measurably improve the quality of water discharged by a facility.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

Aggregation of process wastewaters within refinery and petrochemical processes is not

"impermissible dilution" subject to the above-mentioned caveat.

DCN PH4P020
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SUBJECT EQUV
SUBJNUM 020
COMMENT

C. ABT unit surface impoundments do not pose any significant risk

Exxon encourages EPA to consider API's comments on this matter. Because of the design of ABTs, UHCs present in wastewater reach their concentration in the ABT unit outlet almost immediately. Should leakage from an ABT unit occur, it would be of treated water. Mixing in an ABT unit is mathematically modeled as a Continuous Stirred Tank Reactor or Perfectly Mixed Flow Reactor. This type of model means that constituent composition and temperature are the same throughout the entire reactor in every direction. EPA recognized the importance of being a well-mixed system in its definition of ABT units. See 40 CFR 261.31.b. If the ABT unit effluent is designated as BDAT technology and ABTs approximate Continuous Stirred Tank Reactors, there should be no concern about water leakage from ABT surface impoundments and EPA should not require tank-based ABTs.

E. Selection of ABT as BDAT for wastewaters alleviates monitoring concerns, ensures proper unit operation and minimizes analytical costs

1. Matrix interferences in wastewater support selection of a technology-based standard

Wastewater is a complex matrix of constituents. Analysis of wastewater is frequently limited by "matrix interferences" which result from the inability of today's analytical methods to distinguish between constituents at low concentration levels. EPA has set UTS at the low ppm and ppb levels for numerous constituents, so it is reasonable to expect "false positive" analytical results that exceed UTS. In order to avoid these concerns, EPA should select a treatment technology such as ABT that has been demonstrated to consistently meet UTS.

2. Monitoring of indicator pollutants is sufficient to demonstrate the efficacy of ABTs

CWA permits typically rely on indicator pollutants to simultaneously represent several

constituents of concern in discharge permits. The molecular similarity of many hydrocarbon compounds from a refinery and/or co-located petrochemical plant makes the use of these "surrogates" a reliable method of ensuring acceptable water treatment. Exxon encourages EPA to consider relying on the indicator pollutants measured in a facility CWA discharge permit as demonstrative of a well-operating ABT unit. The substitution of CWA discharge permit parameters for a UTS analysis will result in analytical savings to industry facilities without compromising environmental protection.

V. EPA should limit the scope of the Phase IV LDR

EPA is not obligated by the Third Third opinion to consider additional requirements for non-hazardous storage or biological treatment impoundments. As outlined in III.C.1 and IV.F above, the cost of promulgating additional controls to either stormwater or treatment surface impoundments is prohibitive and the risk mitigated is minimal. The high costs coupled with the low risk from these impoundments makes it critical that EPA limit the scope of the Phase IV LDR.

A. The Third Third opinion requires that CWA and RCRA treatment standards be equivalent, not that CWA and RCRA management units be equivalent.

Exxon strongly disagrees with EPA's proposed extension of the Third Third opinion from treatment standards for hazardous constituents to "release standards" for impoundments treating non-hazardous wastes. EPA apparently considers these "release standards" for air, leaks and sludges the major component of the Phase IV LDR. This broad reading clearly contradicts the court's intent, to say nothing of the unnecessary over-regulation of treatment impoundments. For example, the court recognized surface impoundment treatment by stating that

. . . treatment of solid wastes in a CWA surface impoundment must meet RCRA requirements prior to ultimate discharge into waters of the United States. 976 F.2d at 20. Emphasis added.

The court makes several references to unlined surface impoundments, confirming their continued use for management of non-hazardous decharacterized wastes. Again, the court stated that

Following aggregation, the facilities sometimes place the combined stream in an unlined surface impoundment as part of the CWA treatment train. These impoundments do not meet RCRA Subtitle C standards and they are regulated solely under RCRA Subtitle D. 976 F.2d at 20.

The court again supported the continued use of surface impoundments by concluding that

. . . allowing temporary deposit of decharacterized wastes is a reasonable accommodation [between RCRA and CWA] so long as complete circumvention of the treatment standards does not occur. 976 F.2d at 24.

finally, in summarizing whether CWA systems treating decharacterized wastes satisfy the RCRA treatment standards, the court stated that

. . . the result here is unique to CWA systems. Nothing herein permits the placement . . . of hazardous wastes or formerly hazardous wastes which have not yet met section 3004(m)(1) treatment standards into non-Subtitle C surface impoundments except in existing CWA treatment systems which ultimately treat the streams to full section 3004(m)(1) standards. See 976 F.2d at 24. Emphasis added.

In summary, EPA is not obligated by the Third Third opinion to promulgate "leakage standards" for treatment impoundments managing non-hazardous wastes. EPA is required to consider only equivalency between CWA treatment standards and RCRA treatment standards. EPA should minimize the impact of the Phase IV LDR, which addresses minimal risk, by refusing to consider additional surface impoundment controls and promulgating Option 1 under the Phase IV LDR.

RESPONSE:

As explained by the Agency in the preamble to the LDR Phase III final rule, biotreatment systems vary in performance both in general and as to specific constituents. The Agency therefore is reluctant to designate ABT as BDAT. The Agency has data related to the performance of ABT from only 10 facilities. The main reason for establishing ABT as BDAT that was provided by commenters to the Agency, during the development of the final Phase III rulemaking, was the elimination of the compliance monitoring burden. The Agency does not believe that reducing monitoring burden is an adequate justification for creating a new technology-specific treatment standard. However, EPA did decide, in promulgating the LDR Phase III final rule, to reduce the monitoring requirements for decharacterized wastes that are managed in a wastewater treatment system involving ABT. These wastes must be monitored annually to ensure compliance with the treatment standards for underlying hazardous constituents.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P021
COMMENTS Georgia-Pacific
RESPONDER
SUBJECT EQUV
SUBJNUM 021
COMMENT

Support of AF&PA Comments:

AF&PA has supplied comments which recommend the choice of Option 1 as the regulatory basis for the Phase IV rule, should EPA determine that such regulations are required. As indicated above, Georgia-Pacific supports this recommendation and hereby incorporates the AF&PA comments, into this letter. These comments and the information regarding compliance costs provided above demonstrate that the choice of either of the other two options would provide no significant additional environmental benefit but would very substantially increase compliance costs. We urge the Agency to make a reasoned choice in this matter, which is supported by the overall low priority need for additional regulation and low degree of risk represented by continued operation of the Pulp and Paper Industry's good performing Clean Water Act permitted treatment systems.

RESPONSE

The Agency notes the commenter's support for the comments submitted by the American Forest and Paper Association.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P021
COMMENTS COMMENTER Georgia Pacific
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 021
COMMENT

Each of the LDR Phase IV rulemaking options proposed by EPA would place additional burdens on G-P. Option 1, the utilization of the Phase III rule (as it was proposed) to satisfy the RCRA equivalence standard, would require significantly more testing and recordkeeping in order to track the concentration of underlying hazardous constituents (UHCs) constituents in decharacterized waste streams. The anticipated costs for this testing activity are \$150,000 per year.

Option 2, the intermediate approach, would require the use of additional treatment systems for certain waste streams or the modification of primary clarifiers at existing CWA permitted treatment plants. In addition, sludge treatment from primary clarifiers will be required at some locations. Costs to the Company would amount to \$30 million to \$50 million. Georgia-Pacific does not favor this option.

Option 3 would require substantial modification or replacement of most of Georgia-Pacific's treatment systems. New in-mill sewer systems would be required to separate decharacterized wastes from other streams. Treatment would be required for the separated streams. In some cases, the number of waste streams requiring treatment of UHCs, their location or concern for protecting large areas of the mill for the collection and treatment of decharacterized wastes may make it impractical to provide treatment

in separate units. This would require replacement or modification of the mill's entire treatment system. Costs would be very high, in the range of \$100to \$400 million for the thirteen plants combined. This approach is not warranted, impractical and cannot be legally required as described in comments filed by the American Forest and Paper association (AF&PA).

To make Option 1 workable EPA must conclude that LDR requirements are met by compliance with CWA permits. To the extent that UTS values exist for substances for which no CWA permit limit has been set by the appropriate agency, EPA must rely on the professional judgment that such limits are not needed and LDR requirements have been satisfied. In addition, for examination of waste streams with regard to whether or not they meet hazardous waste characteristics, EPA must set the reference sample location for pulp and paper making facilities at the mill process unit boundaries outlined in comments filed by the American Forest and Paper association regarding the proposed Phase III rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P022
COMMENTS Commenter Phelps Dodge
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 022
COMMENT

EPA should clarify that the treatment or dilution of characteristic hazardous wastes in RCRA-exempt treatment units is permissible both to remove the characteristic and to meet applicable LDR treatment standards (e.g., Universal Treatment Standards). If this clarification is not made, decharacterized wastes may be required to undergo treatment beyond the applicable LDR treatment standards. Because the treatment or dilution to remove the characteristic may reduce the toxicity of the hazardous constituents below applicable LDR concentration levels, any additional treatment requirements would be redundant and unnecessary.

EPA should clarify the term "nonhazardous waste surface impoundment" as used in the context of EPA's cross-media release proposals.

EPA also should explain how it intends to apply its equivalency proposals to mining facilities. For example, EPA should clarify whether tailing impoundments would qualify as "Clean Water Act ("CWA")-equivalent systems" or "nonhazardous waste surface impoundments."

PDC supports EPA's proposal to determine LDR treatment standard compliance for CWA systems at the ultimate point of discharge (i.e., end-of-pipe). This same approach should apply to CWA-equivalent systems. However, because CWA-equivalent systems and other similar impoundments do not have an ultimate discharge, such systems should be deemed to have satisfied applicable LDR treatment standards upon the demonstration that the systems have applied CWA-equivalent treatment. There should be no requirement to take samples from such systems in order to determine compliance with LDR treatment standards.

With respect to EPA's proposals regarding potential cross-media releases from Surface impoundments managing decharacterized wastes, PDC strongly supports Option 1. Option 1 correctly defers to existing and future federal, state, and local regulatory programs that are specifically designed to address leaks, sludges, and

potential air emissions from Surface impoundments.

Option 2, on the other hand, not only would ignore the statutory requirement under RCRA to ensure accommodation with the CWA, but also would result in duplicative and therefore unnecessary regulation of nonhazardous wastewater management systems.

II. Treatment or Dilution to Remove a Hazardous Characteristic Should Satisfy LDR Requirements if Treatment Reduces Any Underlying Hazardous Constituents to Levels Below the Universal Treatment Standards.

An apparent assumption underlying EPA's proposal to adopt "equivalency" requirements for CWA and CWA-equivalent systems managing decharacterized wastes is that treatment to remove the hazardous waste characteristic does not necessarily suffice for LDR treatment purposes even if the wastes, after removal of the characteristic, meet the applicable treatment standards (i.e., the Universal Treatment Standards ("UTS")). 60 Fed. Reg. at 43,655. This assumption, however, is not required or supported by the decision in *Chemical Waste management v. EPA* ("CWM"), 976 F.2d 2 (D.C. Cir. 1992), cert. denied, 113 S. Ct. 1961(1993). Rather, the CWM decision arguably suggests that the point at which a decharacterized waste must meet the UTS is after treatment to remove the characteristic. Consequently, if the waste meets the UTS after decharacterization, no further LDR requirements should apply. It is illogical and unnecessary from an environmental and human health perspective to require additional treatment of a decharacterized waste that already meets the applicable LDR treatment standards. In such situations, there would be no standard available to evaluate the effectiveness of any further treatment. Consequently, EPA's proposals essentially result in treatment for the sake of treatment without any environmental or human health benefit resulting from the treatment.

With respect to dilution or treatment to remove the hazardous waste characteristic, the CWM court stated that under RCRA, "dilution of characteristic hazardous wastes may constitute [acceptable LDR] treatment, but only if no hazardous constituents are present following dilution that would endanger human health or the environment." 976 F.2d at 7 (emphasis added). The court implied that compliance with the UTS should be determined after treatment or permitted dilution, not at the point of generation. The CWM court also stated that "where dilution to remove the characteristic meets the definition of treatment under section 3004(m)(1), nothing more is required." 976 F.2d at 23

(emphasis in original). This statement suggests that the court understood that, in certain instances, dilution or treatment to remove the characteristic would satisfy the LDR treatment standard. PDC believes that these instances include situations in which characteristic wastes from related processes are routed to elementary neutralization units or other exempt treatment units for removal of the hazardous waste characteristic. If during removal of the hazardous waste characteristic, the concentrations of underlying hazardous constituents are reduced (i.e., the toxicity of the hazardous constituents are reduced), this should satisfy the applicable LDR treatment standards.

The fact that treatment or dilution to decharacterize a waste may reduce the concentrations of underlying hazardous constituents below the applicable standards (i.e., UTS), is consistent with EPA's interpretation of the principal holdings in CWM with respect to characteristic wastes. According to EPA, the CWM decision requires persons managing decharacterized wastes in centralized wastewater management units to be able to demonstrate "that hazardous constituents are reduced, destroyed, or immobilized to the same extent as they would be pursuant to otherwise-applicable RCRA treatment standards. " 60 Fed. Reg. at 43,656 (emphasis added). PDC believes that the "reduction" in the concentration of underlying hazardous constituents during deactivation should be sufficient to satisfy the LDRs.

PDC is concerned with EPA's implication that decharacterized wastes, even if the wastes are treated to remove the hazardous waste characteristic and the treatment reduces the concentration of any hazardous constituents below the concentrations in the UTS, cannot be land disposed until underlying hazardous constituents are destroyed or immobilized. 60 Fed. Reg. at 43,656. This statement suggests that if decharacterized wastes are initially managed in RCRA-exempt units, such as elementary neutralization or totally enclosed treatment units, and management in the unit not only removes the hazardous waste characteristic, but also causes the waste to meet the UTS, the waste still will need to be further treated to ensure that underlying hazardous constituents present before the initial treatment are either immobilized or treated to non-detect. This requirement is insupportable and may require decharacterized wastes to be treated beyond even the constituent-specific concentrations established in the UTS.

PDC therefore requests that EPA amend its proposed Phase III and Phase IV LDR proposals to provide that if treatment of a waste to remove the hazardous waste characteristic causes the waste to meet

the UTS, the waste will be deemed to have met the LDR treatment standards (especially when such standards are set in terms of constituent concentrations) and can be land disposed (whether in a CWA system or not) without any further legal requirements.

V. Zero-Discharge Mining Impoundments, Including Tailing Impoundments. Should Generally Qualify as CWA-Equivalent Systems.

EPA states that the term "CWA treatment system" includes CWA-equivalent systems as well as other nonhazardous waste surface impoundments. 60 Fed. Reg. at 43,657. It is unclear in the proposed rule what is meant by "other nonhazardous waste surface impoundments." For example, does the term apply to any surface impoundment used to manage decharacterized wastes, regardless of whether it ultimately discharges to a "water of the United States" or undergoes CWA-equivalent treatment? PDC requests that EPA clarify the term "nonhazardous waste surface impoundment." It also is unclear whether a tailing impoundment that does not discharge to "waters of the United States" would qualify as a "CWA-equivalent system" or "nonhazardous waste surface impoundment" for purposes of EPA's proposed Phase IV LDR rule. PDC believes that such impoundments should qualify as "CWA-equivalent systems" since they are subject to stringent federal effluent discharge limitations under the CWA that in some instances may require zero-discharge. EPA should clarify how it intends to apply its equivalency proposals to mining facilities.

VI. Compliance With UTS for Zero-Discharge Facilities Should Be Based Solely on the application of CWA-Equivalent Treatment.

The Phase III and Phase IV proposals envision that a zero-discharge facility, such as availing impoundment, is permitted to receive decharacterized wastes that exceed the UTS at the point of entry into the facility. However, it is unclear at what point the determination of compliance with the UTS should be made. In the proposed Phase III LDR rule, EPA clarified that compliance with UTS would be determined at the end-of-pipe for surface impoundments that ultimately discharge to "waters of the United States" or to publicly-owned treatment works("POTW"). See 60 Fed. Reg. at 11,710. This same general concept should apply to CWA equivalent and other nonhazardous wastewater treatment systems. In other words, the point of determining compliance with the UTS should not be made at the point of entry into the treatment train or surface impoundment. However, because of the difficulty of testing for compliance with UTS without a point of discharge from a facility, PDC believes that as long as a zero-discharge facility is

able to demonstrate that it has applied CWA-equivalent treatment, this demonstration should be sufficient to satisfy the LDRs. Consequently, PDC requests that EPA clarify that zero-discharge facilities which receive decharacterized wastes that exceed the UTS at the point of entry are deemed to satisfy the applicable LDR standard i.e., the UTS) if CWA-equivalent treatment has been applied.

VII. Option 1 Should be Adopted Because it Correctly Defers to Existing and Future Federal, State, or Local Regulatory Programs for Addressing Cross-Media Releases From CWA or CWA-Equivalent Surface Impoundments.

EPA outlines three options to address the risks posed by cross-media releases of hazardous constituents from surface impoundments used in CWA or CWA-equivalent treatment systems. Option 1 would rely on the end-of-pipe approach established in the proposed Phase III LDR rule to meet the treatment equivalency requirement established in CWM. PDC strongly supports this option, primarily because it is consistent with the CWM decision and would not impose far-reaching RCRA control requirements on facilities that do not actually manage "hazardous waste." Option 1 also correctly defers to existing and future federal, state, or local regulatory programs that are designed to adequately address cross-media releases from surface impoundments. The adoption of duplicative requirements is unnecessary.

With respect to potential releases to groundwater, PDC believes that state groundwater protection programs can be relied on to prevent excessive releases from CWA or CWA-equivalent surface impoundments. For example, Arizona (in which PDC operates several facilities) has adopted a comprehensive aquifer protection permit program that specifically applies to both new and existing surface impoundments, including surface impoundments used as part of a CWA system. A.R.S. § 49-241.B.1. This permit program requires affected facilities to ensure that they are designed, constructed, and operated to ensure the greatest degree of discharge reduction achievable through application of the best available demonstrated control technology (e.g., liners, leak detection systems). A.R.S. § 49-243.B. 1. Affected facilities also are required to ensure that aquifer water quality standards are met at the applicable point of compliance (generally established at a point in the aquifer immediately down gradient of the facility). A.R.S. § 49-243.B.2. Arizona's aquifer water quality standards generally are based on the primary drinking water maximum contaminant levels ("MCLs") adopted by EPA under the federal Safe

Drinking Water Act. A.R.S. § 49-223.A; Ariz. Admin. Code ("A.A.C."), Title 18, Chapter 11, Article 4. Aquifer water quality standards also maybe established for pollutants for which MCLs have not been established or for which the Arizona Department of Environmental Quality finds that the MCL is inappropriate as an aquifer water quality standard. A.R.S. § 49-223. B. Finally, several narrative aquifer water quality standards have been established including a prohibition on discharges to aquifers that would endanger human health. A.A.C. R18-11-405 New Mexico (in which PDC also operates several facilities) also has a comprehensive groundwater protection program. New Mexico's program requires any person who discharges into ground water, directly or indirectly, any contaminant listed in the ground water quality standards or any toxic pollutant to notify the state environmental agency. Within 60 days of the notice, the state environmental agency will inform the person who made the notification whether a discharge plan must be submitted. A discharge plan is approved if it meets the requirements set forth in Section 3-109.C of the New Mexico Water Quality Control commission ("WQCC") regulations. Generally, the approval of a discharge plan may not result in either concentrations in excess of the standards of Section 3-103 or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use." WQCC Regs. § 3-109.C.2. The standards established in Section 3-103 in most instances track the federal MCLs. "Toxic pollutant" is deemed as "a water contaminant or combination of water contaminants in concentration(s) which, upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains, will unreasonably threaten to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit." WQCC Regs. § 3101.ZZ.

In addition to state groundwater protection programs, federal law (4, RCRA Subtitle D) prohibits any solid waste disposal facility or practice, which would include most mining-related impoundments, that constitutes "open dumping." A solid waste disposal facility or practice is deemed to be "open dumping" if it fails to meet any of the national performance standards of 40 C.F.R. Part 257. One of the national performance standards addresses potential impacts on groundwater. Specifically, the "groundwater" performance standard prohibits all solid waste disposal facilities and practices from "contaminating" an "underground drinking water

source "beyond the "solid waste boundary." 40 C.F.R. § 257.3-4. "Contaminate" means to introduce a substance that would cause either (1) the concentration of that substance in the groundwater to exceed the maximum contaminant levels specified in Appendix I to 40 C.F.R. Part 257, or(2) an increase in the concentration of that substance in the groundwater where the existing concentration of that substance exceeds the maximum contaminant level specified in Appendix I of 40 C.F.R. Part 257. 40 C.F.R. § 257.3-4(c)(2). "Solid waste boundary" means "the outermost perimeter of the solid waste (projected in the horizontal plane) as it would exist at completion of the disposal activity." 40 C.F.R. § 257.3-4(c)(5).

With respect to potential releases of hazardous constituents to sludges in CWA or CWA-equivalent surface impoundments, PDC believes that the appropriate approach is to use EPA's treatability group principle. In other words, once the owner or operator of a CWA or CWA-equivalent surface impoundment decides to remove sludge from the impoundment for land disposal elsewhere, this should be considered as a new point of generation, and the sludge should be reevaluated to determine whether it is subject to the LDRs. In addition to the treatability group principle, removed sludges are regulated under state and federal hazardous and solid waste management programs.

As recognized by EPA (see 60 Fed. Reg. at 43,659-60), PDC believes that the federal Clean Air Act ("CAA") provides sufficient control over potential air emissions from CWA or CWA-equivalent surface impoundments that manage decharacterized wastes. The proposal to require additional air-related requirements would violate RCRA § 1006(b) which requires EPA to accommodate CAA requirements.

VIII. EPA Proposal (Option 2) to Adopt "Equivalency" Requirements for Sludges, Leaks, and Air Emissions from CWA and CWA-Equivalent Surface Impoundments is Inconsistent with the Decision in CWM and Would Ignore Accommodation with the CWA.

EPA freely admits in the preamble to the proposed Phase IV LDR rule that the court in CWM did not explicitly require EPA to adopt management requirements for hazardous constituent releases from CWA or CWA-equivalent surface impoundments. 60 Fed. Reg. at 43,656. Rather, the focus of the court was on the status of the waste stream being managed in and eventually discharged from the surface impoundment, and not on the characteristics of the surface impoundment. 60 Fed. Reg. at 43,656. EPA also points out that the CWM court did not address the treatability group principle by EPA in the Third-Third LDR rule (see 55 Fed.Reg. 22,661-62 (June 1,

1990). Under the treatability group principle, wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes even though they may derive from prohibited wastes.

Notwithstanding the lack of explicit direction from the court, EPA is proposing to adopt extensive controls for sludges, leaks, and air emissions from CWA and CWA-equivalent surface impoundments. EPA supports this decision by arguing that the thrust of the CWM decision was to assure that LDR treatment requirements are not thwarted by cross-media transfers of untreated hazardous constituents, whether by dilution or by escape from treatment units. 60 Fed. Reg. 43,656. These concerns, however, arguably were not raised in the context of a CWA or CWA-equivalent surface impoundment where RCRA requires accommodation with the CWA. EPA also notes that the CWM court distinguished between temporary placement of wastes in surface impoundments and permanent disposal. This distinction, however, focused on the requirements applicable to wastes placed in different types of surface impoundments and not on the characteristics of the surface impoundments.

EPA's proposal also would result, in many instances, in duplicative regulation at the state and federal level. For instance, as noted above, both Arizona and New Mexico, the primary states in which PDC maintains operations, have extensive groundwater protection programs that apply to surface impoundments managing decharacterized wastes. Although EPA indicates that it would attempt to avoid duplication with similar federal, state, or local requirements, this would be very difficult to actually apply on a site-by-site basis. Coordination between already existing programs and RCRA imposed controls would require difficult judgments regarding the similarity of the existing programs to RCRA controls and whether the programs are as stringent as RCRA controls. Ultimately, a site may be required in many instances to comply with both the controls established under Phase IV and other applicable state or federal requirements.

PDC therefore urges EPA not to adopt specific control requirements for sludges, leaks, and air emissions from CWA or CWA-equivalent surface impoundments. Rather, EPA should rely on other current and future federal and state programs (i.e., Option 1) to address these issues. The Option 2 proposals not only would ignore accommodation with the CWA, but also would impose RCRA requirements on units that do not manage "hazardous waste."

IX. PDC Concurs With EPA's Decision Not to Recommend Option 3.

Option 3 would require that decharacterized wastes be treated to meet UTS before entry into surface impoundments. However, because of the high costs to affected industries and the lack of accommodation with the CWA, EPA is not recommending this option. PDC concurs with EPA's decision. Option 3 is directly inconsistent with the decision in CWM, which requires at least some accommodation between RCRA and the CWA. As noted by EPA, this option would destroy the accommodation between the CWA and RCRA upheld by the CWM court. Option 3 also would force industry to manage large amounts of wastewaters in prohibitively expensive tanks or other similar systems.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024

COMMENTS Union Camp Corporation

RESPONDER SS

SUBJECT EQUV

COMMENTS Introduction and Summary The Phase IV Rules consist largely of EPA's preamble discussion and an analysis of three proposed options for addressing the issue of RCRA treatment equivalency for wastes that are decharacterized by dilution and subsequently treated in CWA surface impoundments. Decharacterization by other means than dilution is not subject to proposed management standards (2.4 and 7.4, Technical Support Document, July 1995) Option 1 holds that the Phase III rule (end-of-pipe standards) satisfies equivalency requirements noted by the court in Chemical Waste Management, Inc. et.al. v. EPA, 976 F 2d. Option 2 would impose additional Land Disposal Regulations (LDR) requirements on CWA impoundments. Option 3 would preclude use of CWA impoundments to perform RCRA equivalent treatment. EPA rejected Option 3 and stated that it is "neutral between the first and second options" 60 Fed. Reg. 43659, but seeks comment on the three options. EPA has asked for comments on which of the three proposed options for a Phase IV rule it should choose, and for specific comments on how the chosen option might need to be modified. Union Camp Corporation is very concerned about the imposition of Phase IV requirements on our decharacterized wastewaters and surface impoundments. Because of the volume of waste streams and the size of impoundments impacted, it was very worthwhile for our company to understand in great detail the impact the proposal would have on our pulp and paper mills and chemical operations. From our review we believe that the waste streams most impacted in our facilities will be the chemical pulp mill discharges containing black liquor, bleach plant discharges, turpentine separation wastewaters and chemical plant waste streams containing methanol. Even though the proposed Cluster Rule or other Clean Air Act rulemaking will significantly impact the disposition of these wastes in the next several years (Cluster Rule is imminent), Phase IV could impose another significant body of regulation on top of these requirements.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which

initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024

COMMENTS Union Camp Corporation

RESPONDER SS

SUBJECT EQUV

COMMENT Therefore, Union Camp's comments on the Phase IV proposal are consolidated around the three basic contentions and presented in the following order. I. Option 1 is the correct option for EPA to choose. We believe that the legal arguments made by AFPA, CMA and others are compelling, and will be paraphrased here. We will present reasons why we believe that Option 2 includes unnecessary regulation. II. Option 3 is unnecessary, extreme and must be rejected. III. The Pulp and Paper and related industry do not pose a significant risk and therefore Option 2 must not be applicable to this industry. We have additional concerns which did not fit into the body of the above arguments and are included in a section titled additional concerns (Section IV).

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024

COMMENTS Union Camp Corporation

RESPONDER SS

SUBJECT EQUV

COMMENT G. EPA Correctly Avoids Regulatory Duplication by Deferring to Other Federal Rules That Will Protect Human Health and the Environment Such as the Proposed MACT Requirements for the Pulp and Paper Industry. EPA stated in the Phase IV preamble that "to avoid duplication with other requirements, EPA would defer to other federal rules which establish controls addressing the same situations." 60 Fed. Reg. 43660. EPA is correct to do so for at least two reasons. First, RCRA § 1006(b)(1) requires that the Administrator "shall integrate all provisions of [RCRA] for purposes of administration and enforcement and shall avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act" 42 U.S.C. § 6905(b)(1). Second, EPA recognizes that certain "inefficiencies and confusion could occur if Option 2 controls were applied and soon superseded by upcoming Clean Air Act ("CAA") standards" as in the case of the pending MACT standards for the pulp and paper industry. *Id.* It would make no sense for EPA to impose LDR air emissions standards that are possibly inconsistent with those now being considered by EPA's Office for Air and Radiation.

Thus, EPA's proposal to defer to such rules honors both its statutory requirements and the concept of practical regulation. The Pulp and Paper Industry will soon be under the new requirements of the Cluster Rule which established Maximum Achievable Control Technologies, under the Clean Air Act Amendments of 1990, and Effluent Guidelines, under the Clean Water Act. Requirements will include process changes, management systems, pollution control technologies and environmental testing to address the presence of volatile organics, chlorinated organics, and priority pollutants in the air emissions and wastewaters generated by this industry. MACT requirements will impose restrictions on the emission of hazardous air pollutants from pulp mills and bleach plants. Effluent guidelines for the Pulp and Paper Industry will impose restrictions on the in-plant waste streams and end-of-pipe discharges. Union Camp operates chemical pulp mills and bleached kraft mills which will be impacted by the final Cluster Rule. As well our Chemical Division and Bush, Boake, Allen subsidiary operate chemical plants which have their MACT and effluent guidelines. With this in mind we have the following concerns.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P024

COMMENTS Union Camp Corporation

RESPONDER SS

SUBJECT EQUV

COMMENT C. EPA Should Tailor its Phase IV Rule Decision to Each

Industry Studied. Though we have stated our contention that Phase IV rules are necessary, a risk assessment makes sense when applied to valid data. EPA has crafted industry-specific RCRA rules for many years. See, e.g., 40 C.F.R. § 261.4 (industry-specific exclusions from definition of solid waste) and attempted to follow that practice in the Phase IV rulemaking. Industry-specific data collected for development of effluent limitations guidelines by EPA's Office of Water was cited in Regulatory Development Document 60 Fed. Reg. 43657. EPA should have been able to assess risks on an industry-specific basis, but it appears from the preamble that EPA did not consistently. For example, EPA's discussion of risk estimates for sludge focuses exclusively on "estimated sludge concentrations in the OCPSF industry." 60 Fed. Reg. 43659. EPA estimated that potential cancer health risks in the OCPSF industry exceeded the Agency's 10⁻⁵ threshold. It apparently applied these results to each of the five industries studied, because the Agency does not mention vastly different results it obtained for them. 60 Fed. Reg. 43659. EPA's reliance on only the OCPSF sludge risk estimates to judge whether LDR rules are warranted for the pulp and paper and other industries is erroneous. For one reason, EPA's "sludge data" for the OCPSF industry was not really data at all; rather it was calculated based on a series of assumptions concerning constituent partitioning factors and sludge generation rates.² EPA should not rely on estimates when it has direct measurement data available. For another reason, industry specific data for pulp and paper and other industries show that releases from sludge pose no significant health risks.

RESPONSE

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COMMENTS Union Camp Corporation

RESPONDER SS

SUBJECT EQUV

COMMENT E. The Risk Assessment Program Conducted by NCASI Shows That

Possible Releases of UHCs From Paper CWASIs and Wastewater Treatment Sludge do not Present Significant Risk to Human Health and the Environment NCASI Wastewater Sampling and Analysis Program. In 1993 NCASI undertook a 10-mill sampling and analysis program to investigate how various LDR regulatory options might affect the pulp and paper industry. NCASI selected 10 mills to represent a wide range of paper production types and wastewater treatment strategies. The mills studied included three bleached kraft facilities, an unbleached kraft mill, a sulphite mill, a de-ink tissue and a de-ink newsprint mill, a wastepaper board and wastepaper corrugated medium mill, and a groundwood newsprint mill. Wastewater samples were taken from the influent and effluent of the active treatment facilities. For mills that use aerated basins following a primary clarifier, samples were taken from the effluent of the primary clarifier and the effluent of the aerated basin or, if so equipped, from the effluent of the settling pond. For mills with activated sludge systems, samples were taken from the effluent of the primary clarifier and from the effluent of the secondary clarifier. Samples were collected twice per day for three days per week for a three weeks. The samples analyzed and the analytical results represent a three day composite sample, for each of three weeks. In all cases, even the high-risk scenario using the ultra-conservative DAFs of 6 and 12, the individual lifetime cancer risk estimates for the baseline case (i.e., no additional Phase IV LDR restrictions) are all less than 10^{-5} and range from 10^{-6} to as high as 10^{-10} . All hazard quotients are well below 1. Thus, using the EPA's 10^{-5} significant-risk threshold, we conclude that releases of UHCs from possible surface impoundment leaks or wastewater sludge pose no significant risk to human health or the environment. The data collected by NCASI in its above referenced 10-mill wastewater sampling and analysis program and from NCASI's 150-mill waste characterization database, substantially broaden and update the effluent limitations data on which EPA relied for its initial risk assessment. Thus, EPA should have substantial confidence in the risk assessment conclusions based on these new data. These analyses, performed using the same techniques employed by EPA,

demonstrate that the individual lifetime cancer risks for pulp and paper industry wastestreams are more than an order of magnitude below the 10⁻⁵ significant risk level used by EPA for this rulemaking. Similarly, the hazard quotient for each of the constituents found in these wastestreams is orders of magnitude below 1. Thus, EPA should now conclude, that CWA end-of-pipe controls for these wastestreams are all that is necessary for the pulp and paper industry to achieve RCRA equivalency. Any additional controls on these wastestreams would simply constitute treatment for its own sake and would contravene the teachings of HWTC III and CWM.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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COMMENTS Union Camp Corporation

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COMMENT C. Test Method 25D Produces Artifact VOCs That Bias Test

Results. UCC understands through its association the AF&PA that test Method 25D produces artifact VOCs that bias test results. In summary the AF&PA has told EPA in its Subpart CC comments, that Method 25D is seriously flawed because the method creates VOCs where none otherwise exist. Considering the inherent flaws in this test method UCC believes, it not prudent to incorporate Method 25D into any possible Phase IV controls. UCC has also learned that Method 25D exaggerates the amount of volatile organics in particular wastestreams. This would results in unnecessary regulation, when these wastestreams would not pose a risk from volatilization of organic compounds under ambient temperatures. This method should not be used for the Phase IV control until these issues can be resolved. ETC's "suggestion" about banning purportedly nonamenable wastes is an example of proof by assertion. They offer no data. For example, ETC claimed that "ICR waste streams nonamenable to biological treatment" include "ICR wastes with water insoluble and highly volatile' F039 constituents" 60 Fed. Reg. 11717-18 (March 2, 1995). To illustrate that generalizations such as this are just plain wrong, NCASI analyzed data it gathered during original research on biodegradability to determine whether water solubility and volatility are likely to have any effect on amenability of compounds in surface impoundments. NCASI began by conducting a two-phase study to gather data concerning the biological treatability of 14 organic compounds. In the first phase of this study NCASI determined biodegradation rate constants for these compounds using bench-scale reactors. In the second phase of the study the fate of individual compounds was estimated during fullscale treatment using the NOCEPM model, with the bench-scale biodegradation rate constants entered as a model input. Complete details about this study appear in Summary of Results of Biotreatability Study of Selected BDAT Compounds NCASI Technical Bulletin which is being submitted in AF&PA LDR Phase IV comment letter.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean

Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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COMMENT J. UCC agrees with the Agency's proposal to trigger additional requirements for impoundments only when leakage poses a risk to receptors, but believes the appropriate levels of contaminants in groundwater should be based on site specific factors. The Agency has proposed that further actions beyond monitoring would not be required unless a drinking water exceedance is detected by monitoring. UCC agrees that tangible evidence of a release which is of concern should precede capital and operating cost increase. K. UCC agrees with the Agency's proposal to defer leakage issues, where a facility is subject to other programs addressing groundwater quality. UCC also suggests that where an impoundment system has been deemed to not require any action, that the Agency also defer in those cases. UCC agrees, as the Agency notes, that many states have groundwater protection programs that include groundwater monitoring and corrective action. The Agency has stated that, to the extent that state programs require groundwater monitoring and corrective action that include the UTS constituents of concern (or can be modified to cover those constituents) the Agency would defer to those programs. UCC believes that where a State program has made a determination that, due to site specific conditions (impoundment construction, local geology, groundwater usage, etc.), monitoring or corrective action is not required, the Agency should defer to such a program, irrespective of the UTS constituent levels in the impoundment. Such a site specific determination must, by definition, be protective of human health and the environment as that is the basis for such State groundwater protection programs in the first place. If actions are not required under such programs, this regulation should not trump those programs. L. UCC agrees that an annual assessment of wastewaters managed in impacted units is reasonable, but questions the need for four samples for each sampling event. The Agency has proposed to use annual sampling of the wastewaters in the surface impoundment to determine if regulated constituents are present at concentrations that exceed the trigger level. The Agency has proposed that determinations of whether or not a trigger level has been exceeded would be calculated from a minimum of a four-sample set on a four-time per year basis (the Agency notes quarterly). The only basis UCC can determine for

requiring four samples per event is that its origin is in the finalized Subpart CC regulations. The logic under that rule does not hold for wastewaters treated in impoundments (that the wastes are potentially variable). The variability of constituent concentrations in wastewaters in impoundments is slight at best, especially on a short-term sampling event, and requiring four samples per event is unnecessarily burdensome. M. UCC agrees with the Agency's assessment that alternatives to groundwater monitoring should be allowed where site specific conditions warrant it and requests that the Agency address those types of units prior to finalization of the Phase IV regulations. EPA has correctly assessed that there are situations where alternatives to groundwater monitoring should be allowed when groundwater monitoring is not practicable or would not detect early releases. The Agency has noted that they are preparing a rulemaking to deal with those situations, but the inference is that that rulemaking will follow this one rather than being developed concurrently. Subjecting facilities to groundwater monitoring that is ineffectual in advance of the referenced rulemaking is an unnecessary economic burden. EPA should delineate which types of units it envisions falling into that category prior to finalizing this rule and defer the monitoring provisions finalized under this rule for those units. N. UCC believes that the Regional Administrator should be able to allow alternatives to corrective action based on site specific factors. The Agency has set up the leakage requirements such that a specific groundwater monitoring result will dictate mandated corrective action. There are bound to be situations which may not warrant any action, such as situations in which there is no receptor down gradient, which should be considered in determining if capital expenditure is necessary. Further consideration for "no action" would apply in situations, where groundwater in vicinity of CWASIs is not usable for potable water use due to local elevation of natural constituents (some of which may be UHCs) or to low water yield. Since the Agency's rationale for not allowing "no action" as an option is that these provisions are self-implementing, UCC requests that the Agency create a provision which allows, with Administrator review and concurrence, a "no action" option. Subjecting that particular provision to Agency review should give the Agency assurance that the option would only be implemented in situations where it is the appropriate option. O. UCC supports public participation in the remediation selection process as

long as limits are placed on the process timing such that remediation is not unduly delayed. The Agency has included a public participation clause in the proposed process of remedy selection and UCC supports that portion of the proposal.

However, where such participation results in shutting down the process of getting requisite remediation underway, the Agency needs to place reasonable bounds on the process.

RESPONSE

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RESPONDER PMC
SUBJECT EQUV
SUBJNUM 024
COMMENT

I. Option 1 is the correct option for EPA to choose.

A. The CWM Court Held That End-of-Pipe Treatment Standards For CWASIs Satisfy RCRA LDR Requirements.

The CWM Court held that allowing placement of decharacterized wastewater in CWASIs represents a reasonable accommodation of CWA and RCRA objectives, and therefore satisfies RCRA LDR requirements, as long as material exiting CWASIs is treated to the same extent required by RCRA. See 976 F.2d 2, 23. The Court fully appreciated that decharacterized wastewater is held temporarily in unlined CWASIs and eventually exits or "discharges" into navigable waters of the United States or publicly owned treatment works ("POTW"). Id. at 20,24. The Court also recognized that levels of pollutants in decharacterized wastewater passing the exit point, or "end-of-the-pipe," are regulated by National Pollution Discharge Elimination System("NPDES") permits. Id. at 20.

With full knowledge of how CWA systems operate, the Court required unlined CWASIs to demonstrate end-of-pipe-equivalence to comply with RCRA -- nothing more. The Court articulated its position at two points in its opinion, in each case making it clear that end-of-pipe

treatment standards satisfy statutory LDR requirements:

1. [Decharacterized] wastes may be placed in . . . impoundments that are part of an integrated CWA treatment train. However, in order for true "accommodation" to be accomplished, we find that RCRA treatment requirements cannot be ignored merely because CWA [sic] is implicated Thus, we hold that, whenever wastes are put in CWA surface impoundments before they have been treated pursuant to RCRA to reduce the toxicity of all hazardous constituents, these wastes must be so treated before exiting the CWA treatment facilities. In other words, CWA facilities must remove the characteristic and decrease the toxicity of the waste's hazardous constituents to the same degree that treatment outside a

CWA system would.

Id. at 22 (emphasis added).

2. [D]echaracterized waste [containing hazardous constituents] may be placed in a surface impoundment if and only if the resulting CWA treatment fully complies with §3004(m)(1). In other words, the material that comes out of CWA treatment facilities that employ surface impoundments must remove the hazardous constituents to the same extent that any other treatment facility that complies with RCRA does.

Id. at 23 (emphasis added).

As noted above, the CWM sanctioned the Option I approach by making it clear that EPA could meet its obligations under RCRA § 3004(m) by providing that the § 3004(m) standard must be met at the CWA system discharge point. EPA is not required to impose the same treatment standards on wastes managed in CWA systems as those that are managed elsewhere; it is simply obliged to ensure that wastes managed in CWA systems meet the §3004(m) minimize threat standard at the CWA discharge point. The CWAs permit or pretreatment requirements, which require, at the least, application of the best practicable control technology currently available(CWA § 301 (b)), supplemented by § 268.48 standards for constituents not covered by the CWA requirements, clearly meet that standard.

The court's litmus test for equivalency is that treatment must meet the requirements of the statute.

The court held that: "the new CWA dilution permission is valid where the waste is decharacterized prior to placement in a CWA surface impoundment and subsequently treated in full conformity with section 3004(m)(1) standards." 976 F.2d at 19.

The end-of-pipe standards proposed in Phase III fully satisfy that standard, and EPA should go no further.

B. The CWM Court Did Not Require LDR Regulations Addressing The Sludge That Forms In CWASIs.

The Court made an informed decision not to require EPA to promulgate special LDR regulations addressing sludge that is formed in CWASIs. Instead, the Court held that sludge generated from the treatment of decharacterized wastewater in CWASIs is covered by RCRA Subtitle C only if the sludge itself is a hazardous waste. Id. at 24, note 10.

Briefs submitted by the litigants in the CWM proceeding made the Court well aware that treating decharacterized wastewater in CWASIs

results in the precipitation of sludge. See NRDC Petitioners Brief at 64 (Metal-bearing wastewater can evaporate to reconcentrate toxic metals.); Industry Intervenors Brief at 29 (Treatment in CWASIs removes metals by precipitation.); Industry Intervenors Brief at 31 (Precipitation of metals into sludge occurs in surface impoundments.); EPA Response Brief at 69 (Treatment of wastewater in CWASIs normally results in the precipitation of metal hydroxide sludges.); EPA Response Brief at 91 (Low TOC ignitable wastes managed in wastewater treatment systems generate non-hazardous sludges.).

In support of its position that RCRA's accommodation provision (§ 1006(b)(1)) allows placement of decharacterized wastewater in CWASIs, EPA argued that its Subtitle C regulations would satisfy the RCRA objective of protecting groundwater from toxic constituents of sludge: NRDC Petitioners argue . . . RCRA's groundwater protection standard is not satisfied by CWA regulation of discharges to surface water. NRDC Br. at 64-68. It is true that CWA rules do not explicitly protect groundwater; this is not to say, however, that EPA is precluded under RCRA from balancing CWA and RCRA objectives in integrating the RCRA dilution prohibition and the CWA rules. First, if a regulated hazardous waste --e.g., a toxic sludge -- precipitates out from non-hazardous wastewaters disposed in the surface impoundment, then that unit becomes subject to subtitle C regulation. 55 Fed.Reg. 39,409, 39,410/3 (Sept. 27, 1990). NRDC Petitioners' assertion that such hazardous sludges could be generated in these impoundments and escape subtitle C is thus simply incorrect. Compare NRDC Br. at 64 EPA Response Brief at 68-69.

In its discussion of accommodation of CWA and RCRA pursuant to RCRA § 1006(b)(1), the Court wholeheartedly embraced EPA's position. It held that allowing placement of decharacterized waste in CWASIs is a reasonable accommodation, in part, because RCRA Subtitle C will protect the environment from threats posed by hazardous sludge that may precipitate during treatment. See 976 F.2d at 24, note 10. In the Court's words.

[A]s the EPA concedes in its brief, if the stream entering the surface impoundment is not decharacterized, then RCRA requires the impoundment to meet subtitle C requirements. Similarly, any hazardous precipitate or other hazardous material generated during CWA treatment must be managed in accord with subtitle C. Id. (emphasis added).

The text of the opinion, read in conjunction with the briefs submitted to the Court, therefore shows that the Court carefully

considered the issue of sludge precipitation and decided that regulation of sludge is required only if it is a listed or characteristic hazardous waste. If the Court wanted to impose LDR requirements for non-hazardous sludge, it certainly would have made its intentions clear.

D. The CWM Court Did Not Require LDR Regulations Addressing Leakage From CWASIs.

The CWM Court focused its analysis exclusively on high volume wastewater that typically passes through CWASIs into navigable waters and POTWs. See 976 F.2d at 24. With respect to such wastewater the Court determined, as discussed above, that end-of-pipe-equivalence satisfies RCRA LDR requirements. The Court did not assess the issue of potential leakage from CWASIs, let alone mandate special LDR requirements to address it.

Briefs submitted by the litigants in the CWM proceeding made the Court well aware that the CWASIs had the potential to leak. The NRDC Petitioners continually referred to CWASIs as "unlined" surface impoundments, a term which the Court used to discuss CWASI's in its opinion. Compare NRDC Petitioners Brief at 26, 59, 60 with 976 F.2d at 20. Obviously, the term "unlined" implies the possibility that CWASI's may leak. Likewise, the Court accepted at face value assertions made by EPA and Industry Intervenors that imposing LDR rules on CWASIs would require "major revamping" of CWA treatment systems, in part because CWASIs cannot qualify for "no-migration variances" that would allow them to receive hazardous waste. Compare Industry Intervenors Brief at 33-35 and EPA Response Brief at 64-67 with 976 F.2d at 21. EPA went so far as to assert that sludges produced during treatment in CWASIs "typically leach low, relatively minimal levels of metals" -- a position not inconsistent with the NRDC Petitioners claim that toxic metals can leach from CWA surface impoundments into groundwater. Compare EPA Response Brief at 69 with NRDC Petitioners Brief at 64-68.

After a full opportunity to review assertions concerning leakage presented by the litigants, the Court decided to say nothing about it. Perhaps the Court concluded that RCRA's accommodation provision (§ 1006(b)(1)) gave EPA discretion to decline to address leakage in light of the massive disruption and minor environmental benefits that would result.¹ Whatever the Court's reasoning, the fact that it decided not to require LDR rules addressing leakage is unmistakable. Accordingly, EPA cannot invoke the CWM opinion to justify Phase IV regulations.

F. Sludges Generated in CWASIs Comprise a New Treatability

Group; Therefore are not Covered by LDRs Unless the Sludges are Characteristic Hazardous Waste.

As part of the final Third-Third Rule, EPA developed specific "decision rules" (hereinafter, "treatability group rules"), which make absolutely clear that non-hazardous sludge generated during treatment of characteristic wastewater is not "prohibited waste" and not subject to LDR regulations. See 55 Fed. Reg. 22520, 22661-662 (June 1, 1990). Nobody challenged the Agency's conclusion in the CWM litigation. In its Phase IV proposal, EPA aptly observes that the CWM court did not address -- let alone remand or vacate -- the treatability group rules, which, in EPA's own words, mandate that "wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, notwithstanding that they may derive from prohibited wastewaters." 60 Fed.Reg. 43654, 43656, col.3 (August 22, 1995). Therefore, the treatability group rules clearly place non-hazardous sludge beyond the scope of the Phase IV rulemaking. Moreover, the rules shed light on why the CWM Court did not require EPA to develop special LDR regulations for sludge. The D.C. Circuit carefully read the Third-Third Rule, including EPA's explicit discussion of its treatability group concept, and concluded that LDR regulations don't apply to sludge. It therefore held that RCRA equivalency could be achieved through the treatment of wastewater only.

In EPA's own words.

[The CWM Court did not say] that hazardous constituents in deposited sludges must be treated. The court in fact did not speak to the principle stated by EPA in the Third Third rule that generation of a new treatability group is considered to be a new point of generation and thus a new point for determining whether a waste is prohibited. 55 FR at 22661-662. Under this principle, unchallenged in the litigation, wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, notwithstanding that they may derive from prohibited wastewaters 60 Fed. Reg. at 43656, col 3.

Therefore EPA must exclude sludge from the Phase IV rule just to comply with its own treatability group rules as well as the CWM opinion.

H. EPA Has Already Regulated Hazardous Air Emissions from Waste Treatment Systems in Other Statutes of the Clean Air Act. Additional Regulation is Under RCRA is Not Required.

EPA must not ignore the strong regulatory initiative already in place for the control of hazardous air emissions. The amended Clean Air Act provides explicit regulation of hazardous air

pollutants(HAPs) in title III. The Agency has stated repeatedly that overlapping regulatory requirements for Part 268 are not required by the Court, nor intended in this proposed rulemaking (60 FR page43659, 43660 and other pages). Union Camp agrees with this position. In title III section 112 of the Clean Air Act, and through Maximum Achievable Control Technology (MACT) rules, the Agency has determined controls of HAPs, and has the ability to regulate any subsequent "residual risks" even after MACT requirements have been installed. EPA must also consider the huge cost and environmental penalties of redundant Clean Air Act and Land-ban requirements.

Title III of the amended Clean Air Act has provided ample and repeated opportunity for EPA to regulate emissions of volatile hazardous air pollutants. In section 112(b)(1), the Agency has listed

189 air pollutants to be specifically controlled. This list includes many of the pollutants EPA may attempt to control under this proposal. In section 112(d) of the Clean Air Act, the Agency must establish lists of industry types and categories that have, or will have hazardous air emission standards placed upon them. These standards are based on the maximum emissions reduction achieved in practice by the best performing 12% (or less) of the industrial group or category for existing sources. The result of the MACT is typically a requirement to reduce emissions of hazardous pollutants by 90% or more.

For example, volatile hazardous emissions in the proposed Pulp and Paper industry MACT, at least 90% of the volatile HAPs must be captured. These must then be further treated in a device with 98% destruction efficiency. In the Hazardous Organic NESHAP (HON) final MACT rule, volatile HAPs must be controlled in process and wastewater operations to at least 98% reduction. In the proposed lead smelter MACT total hydrocarbon HAPs must be treated in a high-temperature afterburner with a scrubber. This will affect at

least 98% control. Many other final and proposed MACTs have similar high removal and destruction efficiencies. These MACTs will cover virtually every major and most minor types of industrial and process categories, (see 56FR 9315). These categories were established based on emissions magnitude, and potential environmental impact. The most important categories will be addressed first. EPA must not overlay this stringent regulatory framework with a conflicting or additional requirements. The Agency

and the public would be better served if the MACT and other title III processes were allowed to proceed unencumbered by contradictory RCRA impediments.

Section 112(f) of title III of the Clean Air Act serves as a "backstop" for control of hazardous air emissions. In this section, EPA is obliged to evaluate the residual risk remaining after MACTs have been in place. The Agency must apply risk assessment methods to calculate the significant public health emissions that may remain. EPA must also propose recommendations to address the risk for any industrial category it finds is appropriate. This "fix" is self-implementing, if Congress does not act on the recommendations, then the Agency may promulgate standards with an ample margin of safety to address the problem. The initial 112(f) report on residual risk is due by November 15, 1996. EPA must not require overlapping and additional control requirements for hazardous air pollutants when section 112(f) has provided for a system for evaluation of these pollutants, and discrete rulemaking as needed.

/ENDC8

As a specific example, EPA must not apply RCRA subpart CC to waste streams neutralized upstream of surface impoundments. The risks (and controls if appropriate) will be addressed under title III of the Clean Air Act. To do so through LDR is poor policy, and a waste of scarce Agency and public resources.

I. The Pulp and Paper and Other Industry are Either Already Covered by a Rule for the Control of Hazardous Air Pollutants, or; Have Been Considered for Control and Rejected by EPA.

EPA acknowledges that if a source is already controlled by other regulations for the release of hazardous air pollutants, then no further regulation may be necessary. This is known as "Option 1" of the proposed land-ban rules. As previously stated Union Camp believes Option 1 is an appropriate selection. Union Camp has shown where title III of the Clean Air Act effectively accomplishes the objective of control of hazardous air emissions through MACTs, followed by evaluation of residual risk. This section will discuss specifically how the Pulp and Paper and other specific industries are either covered by an air rule, or were considered for control but rejected for cause by EPA.

The Pulp and Paper NESHAP, (known as "the Cluster Rule") was proposed on December 17, 1993. This rule was preceded by an EPA data-gathering effort including questionnaires, sampling and comment solicitation. The paper industry also supplied EPA with

volumes of data in support of this rule-making. The intent of the Agency was to simultaneously consider the effects on air, water and

solid-waste from this "Cluster" rulemaking effort. The proposed rule considered all these aspects, but especially the air and water media. The Agency held a series of public meetings during the drafting of the proposed rule to explain their findings and solicit input.

During the early stages of the Cluster rulemaking, EPA surveyed data from Pulp and Paper mills relative to HAPs and especially methanol, in wastewater. Methanol is the overwhelmingly prevalent HAP at a pulp and paper mill, accounting for at least 96% and in most cases 99%, of the HAPs emitted. Because of this, the Agency allowed for the measurement of the HAP methanol (or chlorine from the bleaching process), as this was the only pollutant found and measured in significant amounts. (see NCASI Reports "Industry-Supported MACT Sampling Program," 1993-94, six volumes.). EPA had considered setting a methanol in wastewater limit of 100ppm, based on the presence of methanol in the process, and that the 100ppm was consistent with other rulemaking targets such as the HON. This initial level of 100ppm was a concern to the industry, and was the focus of a special NCASI condensate characterization study. The pulp and paper industry was concerned that the 100ppm was an inappropriate threshold due to the lack of information available to the Agency at that time, and the consequences of control to that level.

Methanol, which is a product of chemical digestion of wood, is often found in condensates associated with spent wood pulping liquor concentration, and in some areas where condensates and process waters are recycled. Lesser amounts of methanol are associated with other areas of a pulp mill, and became concentrated as a facility conserves water and closes up its production cycle. Due to large amounts of water used and recycled in the process of making paper, a treatment threshold of 100ppm was inappropriate and counter-productive to conservation of heat and water.

For example, in unbleached paper mills, water is efficiently recycled throughout the process. Condensates are reused for their heat and ability to wash pulp. As a result, the water in some pulpmill and even paper mill general sewers could reach the 100ppm threshold. The flow of these streams is thousands of gallons per minute. Had the Agency required steam stripping on this large dilute flow (steam stripping is the control technology required by the Pulp and Paper MACT), the cost would have been enormous. A mill would have had to construct a steam stripper the

size of a Saturn Rocket and install a separate boiler to supply the steam. Fossil fuel would in many cases provide the heat to the boiler, with the requisite emissions increase of criteria pollutants.

The overheads from the stripper must go to a boiler for further destruction. The wet gas has no heat value and would have required even more fuel to maintain boiler operation. Additionally, it is doubtful that a steam stripper could even remove methanol to lower than 100ppm. The capital and operating costs would have been enormous and the resulting increase in the products of combustion not worth the estimated decrease in methanol. Upon learning of the consequences of this threshold, EPA considered and rejected controlling emissions from wastewater streams down to 100ppm. As a result, EPA made two important changes to the proposed Cluster Rule. The first was to allow an option of routing the HAPs to a well-operated biological treatment system. The second, was to propose a higher treatment threshold of 500ppm methanol. In the proposed Cluster rule, a source may elect to handle waste streams containing 500ppm or greater in a biological treatment system. This would bring nearly the entire wastewater treatment train under the ambit of the Cluster Rule. The Agency believed that a wastewater treatment system would effectively destroy and not just strip HAPs. Methanol, which is the predominant volatile hazardous air pollutant is highly soluble in water. Low concentrations of methanol typically found in mill wastewaters would have little "driving force" to volatilize from the wastewater mixture. EPA models, and industry supplied data found in the Cluster docket indicate that overall loss of methanol from the biological treatment system is expected to be less than 0.1 % of the total (NCASI Report, Table 5at page 7, Douglas Barton, Cluster Rule Water Docket). A treatment system option was a valid pathway for Cluster compliance. The biological system must have high methanol treatment efficiency and demonstrate this ability through testing and reporting (see 58 FR, page 66177 etseq., proposed 40 CFR 63.446).

If a biological treatment system is not used for the destruction of methanol, then a pulp and papermill must treat 500 ppm streams in another fashion. In the proposed rule, a source may route streams above the threshold to a steam stripper, then to a combustion device such as a boiler or thermal oxidizer. Conveyances for the vapors must be leak-free, with specific testing and reporting to ensure compliance (see 58 FR, page 66177 et seq.). In any case, a pulp and paper mill must identify its HAP

containing wastewater streams, then treat and control them to a very high degree. For example, the proposed Cluster rule would require treatment of such other pulping component streams as turpentine decanter underflow, non-condensable gas system condensates, other condensates above the threshold; as well as air emissions from numerous processes like brownstock washers, black liquor storage tanks, digester systems, chip steaming vessels and others. Control areas in a pulp bleaching component include pulp bleaching stages, bleached pulp storage chests, filtrate storage tanks and others.

Effluent from the bleach plant, once it is sewerred, was considered for control but rejected by EPA due to its low HAP concentrations and extremely high cost (see 58 FR pg. 66140). The 500 ppm threshold was proposed based on what EPA believes is technically achievable, cost-effective and reflects operation at the best performing pulp and paper mills. Although the Cluster Rule is not yet final, the Agency must not obstruct this process by setting an arbitrary standard under Part 268 of 100 ppm. This will plunge facilities back into the untenable position of treating enormous quantities of water at huge cost penalties, with no environmental justification. In fact, this would negate the purpose of the Cluster Rule, i.e. addressing one environmental medium at the expense of another.

As the Pulp and Paper mills have their proposed Cluster, and many organic chemical plants have their final HON; MACT standards are being developed for solid wood products, printing and publishing, papermaking, industrial boilers and miscellaneous chemical production. These and other MACTs will require new controls for hazardous air pollutants. The rulemakings for these processes are still in the workgroup and data gathering stages. Specific requirements are not known. However, the Agency should not get ahead of itself. The rulemakings must proceed based on the appropriate "floor" determinations of the workgroups. This industry-by-industry review envisioned by Congress is more efficient and effective than arbitrarily assigning a 100ppm standard to wastewaters in any MACT. EPA must allow the air regulatory process to progress as planned by the Clean Air Act. This rulemaking framework is sufficient control for hazardous air emissions under both the Clean Air Act and RCRA. The Agency must not attempt to graft a patchwork of conflicting limits through Part 268 onto the CAA and other RCRA sections.

J. The Pulp and Paper Industry's Compliance With the Proposed Cluster Rule's Effluent Guidelines Will Protect Human Health and

the Environment by Requiring Process Changes, Management Systems and Pollution Control Technologies.

Authorized by the Clean Water Act to establish the best available technology economically achievable (BAT), EPA established limits in the Cluster Rule which would enforce technologies that minimize the generation of pollutants and the bioaccumulation potential of pollutants present in effluents at trace levels through process changes.

To arrive at these chemicals of concern and discharge limitations, the Agency completed an extensive study of the paper industry wastewaters apparently used in the Phase IV TSD (understood in the effluent guidelines development as the long-term and short-term studies.) As described in the "Proposed Development Document for the Pulp, Paper and Paperboard Category Effluent Limitations Guidelines" 443 specific pollutants were the subject of extensive study during the development of the Cluster Rule. Through the evaluation of the processes which form the pollutants, the Agency made a determination concerning which pollutants should be subject to further regulations in BAT.

For mills engaged in bleaching of pulps, the Agency identified and chose to regulate dioxin and furan (2,3,7,8-TCDD and 2,3,7,8-TCDF), four volatile organic compounds (methyl ethyl ketone, methylene chloride, chloroform and acetone) and 12 chlorinated phenolic compounds. The list of chemicals was not greater because the Agency reasoned that regulating the 12 chlorinated organics will essentially regulate many other similar compounds. Chloroform and other volatile compounds will be regulated at a point very close to their originate because of their potential to volatilize to the atmosphere during transport, storage and treatment. For the other constituents, it

was necessary for the Agency to set limitations close to their point of origin because of dilution effects further away from the generating processes. As a result, EPA will require bleached kraft paper mills to comply with production based limitations for 18 toxic pollutants at or near their point of originate (in the bleach plant effluent) and not at the effluent of Clean Water Act treatment system.

Due to the restrictions on the bleach plant effluents upon implementation of Cluster Rule, bleach plant process changes will be required. Those mills now bleaching with elemental chlorine must convert their processes to alternate chemicals. With this process change, bleached kraft mills should be able to achieve below detection levels for most of the Cluster Rule parameters and

near detection level for the remainder. This means that volatile organic compounds and priority pollutants from the pulp and paper industry's bleaching processes will be reduced at their source through installation of best available technology.

As well the Agency is proposing under the Cluster Rule that specific best management practices must be instituted as a condition in pulp and paper mill NPDES permits. Through physical changes made to pulp mill spill control and collection systems and through instituting management practices, mills will tighten up their processes to minimize discharge to Clean Water Act systems of spilled black liquor. Though presently covered under the elementary neutralization exclusion, weak black liquor and black liquor, depending on the point of generation are corrosive. And limited data which we have suggests that they contain several UHCs above the UTS and VOCs greater than 100 ppmw. However, when Cluster Rule BMPs are in place, we expect that wastestreams previously containing spent black liquor will be recovered or not exhibit the corrosive characteristic at the point of generation.

EPA is in the process of developing guidance under the Cluster Rule dealing with the implementation of black liquor spill prevention and control practices through best management practices planning.

It is anticipated that control systems will be recommended that depend on pH or conductivity measurements in spill collection sumps to divert to recovery spills, leaks, drips and drabs of black liquor. Depending on the individual mill's recovery capacity, even very dilute spent liquors streams could be recovered, minimizing their discharge into CWA systems.

Because EPA's risk assessment justification for the phase IV rule to apply to the pulp and paper industry was based on data generated during the Cluster Rule development, the efforts to regulate will be duplicative. The development of the Cluster Rule was understandably more thorough in its generation and review of data, and evaluation of process and treatment technologies, than was Phase IV. Therefore, we strongly recommend that the Agency adopt Option I and allow the process changes under Cluster Rule to take effect.

Under the proposed Option 3, decharacterized wastes would have to be treated to meet UTS before they enter into CWA surface impoundments. 60 Fed. Reg. 43655, 43675. UCC is thankful to learn that "EPA is not in favor of the third option, as it is likely to disrupt treatment needed for compliance with the CWA limitations and standards, and impose high costs without targeting risks adequately." 60 Fed. Reg. 43655. UCC believes that EPA is entirely

correct with its opinion that Option 3 would disrupt CWA treatment without environmental benefit. Option 3 would ignore useful treatment that occurs in paper, chemical and other industry surface impoundments and "force modifications at facilities that do, as well as those that do not, pose risks from leaks, air emissions, and sludges." 60 Fed. Reg. 43659.

Option 3 would render RCRA § 1006(b) null, because it would destroy the integration of RCRA and other acts administered by EPA as the Congress ordered. Finally, it would ignore the CWM Court's finding that "under RCRA diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments that are part of an integrated CWA treatment train ... before they have been treated pursuant to RCRA" 976 F.2d 2 at 22. Based on these reasons, UCC believes EPA's rejection of Option 3 is not only correct but required.

A. Subpart CC Requirements Should not be Extended to CWASIs Under Option 2 of the Phase IV LDRs.

Union Camp believes that Subpart CC requirements should not be extended to wastewater treatment impoundments under Option 2 of the Phase IV LDR, because the Subpart CC regulations have not been finalized and are subject to modifications pending the EPA's response to issues raised during the comment period.

Additionally, the EPA needs to identify and eliminate organic compounds which are not VOCS. That is, organic compounds that do not volatilize and/or are readily biodegradable should be identified and eliminated as VOCs in waste determinations. VOCs from nonhazardous wastes also need to be addressed. VOCs from nonhazardous wastes should not be included in calculating organic removal efficiency.

Cost for compliance of the Phase IV VOC releases would be extremely high and unjustified. For example based on the estimate of \$7.21 per square meter provided in the Phase IV RIA, it would cost \$3,200,000 to install a floating cover to control air emissions from Savannah's wastewater treatment surface impoundment. This is only one facility out of a number in our corporation that may be subject to this additional unjustifiable cost. As can be seen, the cover requirement may have a major impact on the cost of this rule to the pulp and paper industry.

B. EPA has Twice Delayed the Effective Date of Subpart CC so That it can Reassess Fundamental Elements of That Rule Including the Underlying Test Method. EPA Should Not, Therefore, Base the Phase IV Air Emission Risk Assessment or Control Measures on the Subpart CC Rules.

EPA's Phase IV risk assessment concerning air emissions, "relied on existing analyses conducted to support the RCRA Subpart CC regulation of air emissions from hazardous wastewater treatment units." RIA at 2-51. These include the regulatory impact analysis for Subpart CC and the background information document ("BID"). But the Subpart CC rules are presently undergoing both EPA administrative review and judicial review in large part because of flaws in EPA's risk assessment and technical background document which underlie the Subpart CC 100 ppmw regulatory threshold, test Method 25D, and other issues affecting the applicability of the Subpart CC rules. Because of these outstanding issues, the Agency has twice postponed the effective date of the Subpart CC rules. 60 Fed. Reg. 26828 (May 19,1995), 60 Fed. Reg. 56952 (Nov. 13, 1995). In addition, EPA published on August 14, 1995a proposed rule and notice of data availability concerning changes to fundamental aspects of the Subpart CC rule including waste determination procedures and the applicability of the rule to units that operate air emission controls under the Clean Air Act ("CAA"). 60 Fed.Reg.41870. In that Federal Register notice, EPA announced that it "is planning to publish a technical correction notice to the rule . . . and may also propose additional changes to the rule in the near future." Id. In view of EPA's on-going administrative review process, the related judicial review of the Subpart CC rules, and fundamental flaws in the underlying Risk Assessment and test methodology -- which we discuss below -- EPA should not base any Phase IV Rule decisions on the Subpart CC rule or its underlying analyses.

D. Inground Concrete Tanks should not be in SI category
UCC recommends that concrete inground tanks be explicitly excluded from the definition of surface impoundments being covered by the Phase IV rule. The surface impoundment definition needs clarification to ensure concrete inground tanks are not included under the phase IV rule management standards. The background document describes and illustrates on several occasions "typical" surface impoundments with side slopes and some with liners. We believe strongly that EPA should not place the concrete inground tank in the same category as a surface impoundment. Wastewater being treated in primary containment units is not a hazardous waste, but only a wastewater with a UHC above UTS level. The placement of an concrete inground tank at the same classification or "threat to environment" level is totally unjustified with the nature of the wastewater. Although these tanks may not meet the court based decision on the

RCRA tank definition, they are indeed tanks. Releases if any from these concrete tanks through construction joints are small in comparison to releases from earthen clay soil based impoundments, which have the full liquid layer as the surface area exposed to the soil. This fact should be taken into consideration in the risk analysis and economic cost analysis. All types of industries as well as local municipalities using concrete inground tanks for primary treatment operations could be affected by this decision. Millions of dollars by industry have already been invested in these units under the Clean Water Act. Municipal POTWs also receiving decharacterized wastewater via dilution may also be affected by this rule at a high economic burden, when budgets are already strained. The inability of the regulated community including municipalities to continue using treatment systems currently in place, many meeting mandated government construction specifications, would create an extreme economic burden for them.

G. Surface Impoundments at Interim Status and Permitted TSDFs Should be Exempted from All Phase IV Management Standards.

UCC agrees with EPA that permitted TSDFs should be totally exempted. During the RCRA Part B permitting process the Subtitle D wastewater surface impoundments receiving non-hazardous wastewater constituents will be inspected to determine if they are causing unacceptable environmental impact via emissions to the air, runoff to surface waters, and seepage into the soil and ground water (§3004(u)). Such inspections will determine if any additional monitoring and/or corrective action is needed for the impoundments on a case-by-case basis. These inspections and subsequent later activities, as needed, assure that the impoundments are being operated in environmentally acceptable manners, according to agency interpretations.

Interim status facilities should be provided the same total exemption as permitted TSDFs, since the same amount of inspections with follow-up monitoring and/or corrective action, as needed, will be conducted during the Part B permitting process or can be conducted under §3008(h). UCC does not believe it to be practical to force interim status facilities to comply with Phase IV requirements if the regulatory agency has the authority to inspect the facility and to request site-specific corrective action measures based on those inspections and any further monitoring. UCC believes total exemption from all Phase IV management standards should be provided for both interim status and permitted TSDFs.

UCC also believes that facilities undergoing corrective action under Consent Orders or other state, federal or local actions should also be exempted from Phase IV corrective action management standards. States may have their own corrective action programs and therefore should be allowed to address corrective action issues in lieu of federal action.

Q. Additional comments on Sludge

UCC believes that EPA's proposed requirement for annual sludge removal from CWASIs is extreme and not necessary. Frequent sludge removal may increase releases since it stirs up material and may damage liners of the impoundment. Air releases and leakage may also increase and carry through of some constituents may occur. Another concern with the sampling is that the treatment facility may require a shut down to facilitate the safe sampling of sludge. The shut down may cause disruption of a sites treatment operation. Cost for the collection and disruption of plant treatment should be considered in the Cost Analysis. After sampling sludge, analysis for UHC is required. Tests for some UHC are not available, unpredictable or extremely expensive.

Another concern with the sampling is that the treatment facility may require a shut down to facilitate the safe sampling of sludge. The shut down may cause disruption of a sites treatment operation. Cost for the collection and disruption of plant treatment should be considered in the Cost Analysis. After sampling sludge, analysis for UHC is required. Tests for some UHC are not available, unpredictable or extremely expensive.

Sludge (p. 43673 2 col) EPA says sludge in place to a release pathway separate from the leaks pathway. We agree with this and also feel sludges in place would tend to retard any leakage due to the build up of sludge and other fine particles.

S. EPA should use scientific knowledge to determine trigger levels for corrective action for UTS constituents which do not have MCLs or State risk-based levels.

Water quality-based limits are developed to protect human health and aquatic-life. Section 304(a)(1) of the Clean Water Act (CWA) requires that the Environmental Protection Agency develop and update water quality criteria (WQC). These criteria are to reflect the latest scientific knowledge on the kind and extent of all identifiable effects of pollutants for the protection of aquatic-life and human health from the presence of pollutants in any body of water, including ground water (Quality Criteria for Water, 1986, EPA).

For UHCs that do not have MCLs or State or tribal risk-based numbers, EPA is proposing that the UTS level be used for the regulated constituent to trigger corrective action requirements [p.43669, 2nd column, 1st paragraph] EPA is proposing that the ground water monitoring and correction action regulations for municipal solid waste landfills (MSWLFs) under the Subtitle D program be adopted with minor modifications for the monitoring and remediation of surface impoundments subject to the LDR Phase IV proposed rule-making. EPA states in the preamble that it believes that the ground water monitoring and corrective action standards in the MSWLF rule are appropriate and protective of surface impoundments subject to LDR Phase IV. However, EPA is adopting only self-implementing portions of the MSWLF ground water monitoring and correction action requirements.

Section 258.55(I) of those requirements states that these ground-water protection standards shall be appropriate health-based levels that satisfy the following criteria:

- (a) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986).
 - (b) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR Part 792) or equivalent;
 - (c) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range;
- and
- (d) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime.

(For purposes of that subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.)

EPA stated that in light of the self-implementing nature of these specific standards for leaks for surface impoundments, EPA decided not to adopt the provisions of 268.55(I) which address site specific protection standards [P. 43672, 3rd column, 1st paragraph]

As presented in the "Technical Support Document - Options for Management Standards for Leaks, Sludges, and Air Emissions from Surface Impoundments Accepting Decharacterized Wastes (page 7-20)", MCLs were identified by EPA as a trigger level because they are a reasonable benchmark of risk posed to human health at a drinking

water source. Under the Safe Drinking Water Act, EPA is required to publish maximum contaminant level goals (MCLGs) for contaminants which may have an adverse human health effect. Since MCLs and MCLGs are required to be set at a level which allows an adequate margin of safety, pollutants with no MCLs or MCLGs have not been identified by EPA as posing the significant risks identified for the others.

Therefore, if Option 2 is chosen, it is recommended that EPA not defer to the UTS level for constituents for which MCLs have not been established, and that corrective action not be required until an MCL or an alternative ground water protection standard has been established by EPA or the State. As opposed to defaulting to the UTS, EPA should adopt the provisions of 268.55(I) for determining if corrective action is warranted for UTS constituents without MCLs.

T. Subpart CC requirements should not be extended to small quantity generators (SQGs) under LDR Phase IV.

Union Camp believes that Subpart CC requirements should not be extended to SQGs. In the preamble to Subpart CC, EPA acknowledges that generators subject to 262.34(d) or (e) are not subject to Subpart CC (p.62902, 2nd column). However, under Phase IV, SQGs will be brought into this regulatory arena based on VOC concentrations at the point of generation. In keeping with its original intent, EPA should maintain the SQG exemption from Subpart CC requirements.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024
COMMENTS Union Camp Corporation
RESPONDER SS
SUBJECT EQUV
SUBJNUM 024
COMMENT

E. The Court Did Not Assess The Application Of LDR Treatment Standards To Air Emissions From Material Placed In CWASIs
EPA can find no support for across-the-board Phase IV air emission rules in the CWM opinion for the simple reason that, with one limited exception, the opinion did not discuss controlling air emissions from materials placed in CWASI's. The Court confined its discussion of air emissions to the portion of its holding that vacated EPA's deactivation standard for ignitable wastes on the grounds that diluting ignitable wastes emits high levels of VOCs. See 976 F.2d at 16-17. The Court never addressed whether LDR treatment requirements must cover air emissions from decharacterized corrosive or reactive waste managed in a CWASI.

As this analysis of the CWM decision shows, the D.C. Circuit confined its pronouncements about RCRA equivalency to wastewaters. EPA recognizes the Court's narrow focus when it said in the preamble "the focus here is on the wastewaters being treated, and the amount hazardous constituents removed from those wastewaters, not other types of wastes (like sludges) or other types of releases." 60 Fed. Reg. 43656. Thus, EPA's Option I is the correct course; the Agency need not promulgate LDR requirements beyond those proposed in the Phase III rules, which meet both the Court's conclusion that "RCRA requires some accommodation with [the] Clean Water Act" and also ensure that "what leaves a CWA treatment facility can be no more toxic than if the waste streams were individually treated pursuant to the RCRA treatment standards." CWM, 976F.2d at 20.

RESPONSE:

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However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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A. A De Minimis Exception to the LDRs is Appropriate and Reasonable.

Existing LDR regulations have for some time incorporated a de minimis exception for certain low risk/low quantity waste streams. See e.g., 40 C.F.R. § 268.1(e)(4) (losses to wastewater treatment systems of certain commercial chemical products) and (e)(5) (laboratory wastes). EPA proposed in its Phase III rules a similar exception for material handling losses, leaks, discharges from safety showers, rinsate from empty containers and for characteristic wastes injected into class 1 non-hazardous wells. In its comments on the Phase III rules, UCC urged EPA to extend the de minimis exception to decharacterized waste streams that are managed in CWA surface impoundments. UCC is gratified to see that EPA has proposed just such an exception in § 268.1 (e)(4)(ii), 60 Fed. Reg. 43691. The proposed de minimis exception is essential for practical implementation of any Option 2 rules the Agency might adopt and places decharacterized wastewaters handled in CWA surface impoundments on an equal footing with those injected into Class 1 wells, laboratory wastes, and the like.

RESPONSE:

The Agency is retaining the de minimis exemption previously promulgated at 40 CFR 268.1(e)(4). In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024
COMMENTS Union Camp Corporation
RESPONDER SS
SUBJECT EQUV
SUBJNUM 024
COMMENT

EPA stated that Phase III comments were not reviewed by the time this Phase IV notice was issued. It is imperative that all comments be reviewed before a final Phase IV rule is promulgated. A final decision regarding upgrading or replacement of impoundments could be influenced by effluent quality, air emission, groundwater quality or sludge quality issues. In addition, the compliance time allowances for both Phases should be consistent if not coincident. Further UCC recommends that Phase IV be re-proposed after Phase III is finalized.

RESPONSE:

EPA had the opportunity to review and consider all comments submitted to the Agency in response to both the Phase III and Phase IV proposed rules prior to the promulgation of today's final rule. In addition, EPA proposed and received and considered public comments in response to one additional proposed rulemaking and a notice of data availability, since publication of the Phase IV proposed rule. EPA published a Supplemental Proposed Rule on January 25, 1996 (61 FR 2338). A notice of data availability related to some issues proposed in the August 22, 1994 proposed rule was published on May 10, 1996.

Given the fact that the Agency published a supplemental proposal, a notice of data availability, and a partial withdrawal related to the proposed requirements, and given the fact that EPA promulgated Phase III LDR requirements on April 8, 1996 (61 FR 15566), EPA disagrees with the commenter's assertion that Phase IV should be re-proposed. After considering all comments and data provided to EPA in response to the Phase III and Phase IV proposed rules, the Phase IV supplemental proposed rule, and the Notice of Data Availability, the Agency believes that sufficient consideration has been given to the issues raised in the proposed rule that allows for promulgation of the Phase IV rule at this time. In addition, the Agency believes there are no discrepancies between or undue burdens caused by the compliance schedules for the Phase III and Phase IV requirements.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P024
COMMENTS Union Camp Corporation
RESPONDER SS
SUBJECT EQUV
SUBJNUM 024
COMMENT

A. A De Minimis Exception to the LDRs is Appropriate and Reasonable.

Existing LDR regulations have for some time incorporated a de minimis exception for certain low risk/low quantity waste streams. See e.g., 40 C.F.R. § 268.1(e)(4) (losses to wastewater treatment systems of certain commercial chemical products) and (e)(5) (laboratory wastes). EPA proposed in its Phase III rules a similar exception for material handling losses, leaks, discharges from safety showers, rinsate from empty containers and for characteristic wastes injected into class 1 non-hazardous wells. In its comments on the Phase III rules, UCC urged EPA to extend the de minimis exception to decharacterized waste streams that are managed in CWA surface impoundments. UCC is gratified to see that EPA has proposed just such an exception in § 268.1 (e)(4)(ii), 60 Fed. Reg. 43691. The proposed de minimis exception is essential for practical implementation of any Option 2 rules the Agency might adopt and places decharacterized wastewaters handled in CWA surface impoundments on an equal footing with those injected into Class 1 wells, laboratory wastes, and the like.

RESPONSE:

The Agency is retaining the de minimis exemption previously promulgated at 40 CFR 268.1(e)(4). In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P025
COMMENTS Magma Copper Co.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 025
COMMENT

Magma believes Option 1 is adequate to control potential cross-media releases from RCRA Subtitle D surface impoundments. EPA offers for comment three options for controlling potential cross-media releases from surface impoundments that receive decharacterized wastes which contain underlying hazardous constituents ("UHCs") above UTS. Option 1 would not require EPA to promulgate LDR requirements, but instead would rely on existing federal and state programs to address risks posed by potential cross-media releases from surface impoundments containing decharacterized wastes.

Magma supports Option 1 because EPA and state agencies have successfully implemented water quality programs to ensure that surface impoundments present no threat to human health and the environment. More specifically, Magma has operations located in Arizona and Nevada. Both of these states have comprehensive programs that address seepage from mining-related surface impoundments as well as sludges that may be formed in these impoundments. These state rules are contained in aquifer protection and mining-specific programs (Arizona and Nevada, respectively), rather than in RCRA programs, and therefore apply regardless of whether an impoundment receives wastes from mineral extraction and beneficiation, mineral processing, or a combination of the two. Based on Magma's experience, state programs are effective in addressing potential impacts from seepage and sludges from its CWA impoundments.

The Arizona Aquifer Protection program focuses specifically on any "discharge" to the ground or to an aquifer that has the potential to violate the state's Aquifer Water Quality Standards.

The authorizing statute includes the presumption that "mine tailings piles and ponds" are discharging facilities that require Aquifer Protection Permits. (ARS 49.241.B.6). In order to receive an Aquifer Protection Permit, a facility must demonstrate that it will meet Aquifer Water Quality Standards. Facilities must employ the Best Available Demonstrated Control Technology in order to meet the standards, and verification monitoring must be conducted.

These requirements apply through the closure of the facility, thereby subjecting any seepage from the tailings remaining in the

impoundment (i.e., "sludges") to these same standards. The co-disposal of acid plant blowdown (a mineral processing waste exhibiting a hazardous characteristic) and mill tailings (a "Bevill-exempt" beneficiation waste) through a totally enclosed treatment facility was specifically considered in the Aquifer Protection Permitting process for Magma's San Manuel operations. The state of Nevada has regulations that specifically address ground water impacts from mining facilities. These rules require permit. for mining impoundments managing production-related fluids. These units must be designed, operated and closed such that any seepage will not violate primary or secondary drinking water standards. Nevada rules require tailings solids to be subjected to a leach test to ensure that seepage from an impoundment will not release contaminants in concentrations that would violate these standards. As with the Arizona program, the "RCRA status" of the wastes has no bearing on Nevada's regulatory decisions regarding the applicability of the program or the measure required to meet ground water standards.

EPA recognizes in this Proposed Rule that existing or forthcoming regulatory mechanisms will adequately prevent impoundments from becoming "conduits for extensive cross-media transfers of untreated hazardous constituents." *Id.* Furthermore, as acknowledged by the Agency, the Phase III LDR requirements are legally sufficient to ensure that "removal of UHCs occurs to the same extent in CWA impoundment-based treatment systems as it does in conventional RCRA treatment systems." 60 Fed. Reg. at 43659. See *Chemical Waste Management v. EPA*, 976 F. 2d 2 (D.C.Cir. 1992), cert. denied 113 S.Ct. 1961 (1993) (hereinafter referred to as the "CWM Decision"). Magma opposes Option 2, which entails unduly burdensome standards, but agrees with the EPA that Option 3 is disruptive and unnecessary.

Option 2 would impose unreasonably onerous management controls on Subtitle D surface impoundments receiving decharacterized waste. Furthermore, EPA does not identify with any specificity why it believes Option 2 is necessary. EPA merely asserts that a certain "subset of situations" is not addressed by existing requirements or those under development. 60 Fed. Reg. at 43659. The Option 2 proposal, therefore, constitutes an over-inclusive, broad based approach to fill unspecified, and perhaps nonexistent, regulatory gaps.

Magma concurs with EPA that Option 3 is an unduly burdensome and unwarranted alternative since facilities could be forced to disrupt their wastewater treatment systems in order to achieve compliance

with the requirements imposed by this option. Magma also agrees with EPA that by requiring that decharacterized wastes meet UTS before entering surface impoundments, Option3 would frustrate the benefits of treatment-based impoundment systems. This is particularly disturbing in light of the fact that the requirements would be uniformly imposed even where littler no risk exists.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P028
COMMENTS Texas Utilities Services
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 028
COMMENT

Texas Utilities believes the proposed controls on air emissions, leaks, and sludges from surface impoundments managing decharacterized wastes would have a significant impact on our operations. As a result of operating 24 power plants with 54 boilers, Texas Utilities is familiar with the problem of managing wastes resulting from the periodic cleaning of boiler steam tubes in order to more efficiently produce electricity. Currently, these boiler cleaning wastes are treated by containment in a tank for disposal off site. Subsequent wastes of the boiler tubes to remove the cleaning solution residue are collected, as a diluted solution, in surface impoundments near the boiler.

Three treatment alternatives for surface impoundments have been proposed. Option 1 would rely on the end-of-the-pipe controls contained in the Clean Water Act management standards in order to treat the wastes. Clean Water Act controls are protective of the environment for the treatment of discharges. Releases to air or groundwater should be treated in accordance with existing state and federal standards. A need has not been demonstrated for additional controls. Texas Utilities would urge adoption of Option 1.

The additional controls on sludges, surface impoundment integrity, and air emissions that EPA is contemplating in Option 2 are necessary. Texas Utilities opposes Option 2 which would result in needless expenditures by the regulated community.

TU opposes Option 3, which would prohibit the placement of decharacterized wastewaters in surface impoundments unless the waste is first treated to comply with treatment standards.

This option is not judicially mandated, is cost-prohibitive, and would provide only de minimis additional environmental protection.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P029
COMMENTS Acrylonitrile Group
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 029
COMMENT

The AN Group then supported, with the CMA, a risk assessment by Gradient Corporation. We believe the findings of this report further point to an unrealistically high estimate of risk by the Agency (660 fold for the air pathway). Improper methodology and obsolete and incomplete data have resulted in an Agency risk estimate which is insupportable.

The Agency noted in the Phase IV preamble that the risks involved with this rulemaking "have the potential to vary from insignificant to significant" (60 FR 43659), and that the Agency is "required to address these issues at this time although there may have been higher environmental priorities if EPA had sole discretion to order its agenda." (60 FR 43656).

We urge the Agency to take the Gradient study into full consideration, and forego any further rulemaking by choosing Option 1. These truly insignificant risks do not warrant any further resource expenditures from either the Agency or Industry.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such

regulation.

DCN PH4P030

COMMENTS National Petroleum Refiners

RESPONDER PMC

SUBJECT EQUV

SUBJNUM 030

COMMENT

1. Existing Clean Water Act controls are sufficient protection of human health and the environment, and therefore EPA should select Option I, which requires no additional controls.

The Clean Water Act (CWA) regulates surface impoundments and the Safe Drinking Water Act (SDWA) regulates injection wells very effectively because, according to EPA's proposal and comments to Congress, the risk not covered by these existing controls is very low. EPA's data analysis supports the 1990 determination by the Agency recognizing the value of treatment and disposal by the CWA and SDWA.

NPRA supports the legal analysis of API, which states that the Third Third decision does not require additional requirements for surface impoundments. Given the high cost of compliance with the LDR rulemakings of \$800 million per year and the minimal benefits, EPA should select Option I for this rulemaking.

HR 2036 will restore EPA's original regulatory determination that RCRA wastes that are no longer hazardous need not be treated as if they were hazardous. HR2036 restores the coordination between RCRA, CWA, and SDWA and validates EPA's original decision.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P030
COMMENTS National Petroleum Refine
RESPONDER SS
SUBJECT EQUV
SUBJNUM 029
COMMENT

2. Recent EPA rulemakings have significantly improved the environmental management of all media at refineries and petrochemical facilities. These regulations have in turn reduced the risk to human health and the environment from surface impoundments resulting in negligible risks.

The Toxicity Characteristic (TC) rule, promulgated on March 25, 1990, significantly reduced benzene and other hazardous constituents in wastewater.

The Primary Sludge Listing rule, promulgated on November 2, 1990, required sludge removal and converted impoundments to non-hazardous service under closure provisions of 40 CFR 265.113.d-e.

The National Emission Standard for Benzene Waste Operations (BWON), promulgated on January 17, 1993, resulted in the segregation and treatment of benzene containing wastewater. In the process complying with the BWON, most other organic constituents such as toluene and xylene were also controlled in the wastewater stripping prior to entering a surface impoundment.

The SOCOMI HON rule, promulgated on February 28, 1994, has reduced hazardous air pollutants from wastewater and other sources at the petrochemical plant.

The RFG rule, promulgated on December 14, 1993, requires refineries to reduce the benzene content in gasoline. This change in gasoline also results in the reductions of emission of benzene at refineries. In addition, the gasoline distribution MACT rule, promulgated on July 28, 1995, reduces the emissions of benzene and other air toxics from the refinery. Both of these rulemakings have significantly lowered the existing baseline emissions of air toxics from the refinery. The new air toxic emission baseline has been reduced to a level that any additional regulation of air toxics as proposed by EPA in Options 2 and 3 cannot be justified as being cost effective.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which

initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P030
COMMENTS National Petroleum Refine
RESPONDER SS
SUBJECT EQUV
SUBJNUM 029
COMMENT

3. The scope of Phase IV rulemaking should not include any additional requirements for surface impoundments.

Stormwater impoundments are very low risk and additional controls proposed under this rulemaking cannot be justified as being cost-effective.

Treatment impoundments managing non-hazardous wastewaters are recognized in the Third Third opinion as integral CWA units.

Stormwater impoundments are important equalizers that are required to maintain the efficacy of biological treatment systems and ensure that the refinery is in compliance with CWA permits. Stormwater impoundments also provide surge protection for wastewater treatment plants and thus prevent the rapid flushing of biomass from the wastewater treatment plant. As an integral part of the CWA treatment system, stormwater impoundments should not be regulated as RCRA units.

The management strategy for a stormwater impoundment requires it to be empty whenever possible so that it can receive stormwater.

Therefore, the residence time of Underlying Hazardous Constituents (UHCs) is low and the water driving force(head) is also low.

Further, decharacterized process wastewater constitutes only a fraction of the total storm water and is predominantly non-oily.

These factors limit the possibility of UHCs migrating out of the stormwater impoundment.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the

characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

There is one caveat. For characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant to the promulgated method.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P030
COMMENTS National Petroleum Refine
RESPONDER SS
SUBJECT EQUV
SUBJNUM 029
COMMENT

4. Advanced biological treatment (ABT) should be designated as Best Demonstrated Available Technology (BDAT) for wastewater and wastewater sludges from refineries and co-located petrochemical plants.

The combination of ABTs and downstream geological impoundments provides long residence times of wastewater in treatment units, low cost, ease of operation, and a cost effective approach to maintaining compliance with the CWA permits.

ABT is a proven cost effective technology that meets the Universal Treatment standards (UTS) and minimizes analytical difficulties and monitoring burdens.

The CWA permits at refineries and petrochemical plants using ABT are protective of human health and the environment.

RESPONSE:

As explained by the Agency in the preamble to the LDR Phase III final rule, biotreatment systems vary in performance both in general and as to specific constituents. The Agency therefore is reluctant to designate ABT as BDAT. The Agency has data related to the performance of ABT from only 10 facilities. The main reason for establishing ABT as BDAT that was provided by commenters to the Agency, during the development of the final Phase III rulemaking, was the elimination of the compliance monitoring burden. The Agency does not believe that reducing monitoring burden is an adequate justification for creating a new technology-specific treatment standard. However, EPA did decide, in promulgating the LDR Phase III final rule, to reduce the monitoring requirements for decharacterized wastes that are managed in a wastewater treatment system involving ABT. These wastes must be monitored annually to ensure compliance with the treatment standards for underlying hazardous constituents.

DCN PH4P031
COMMENTS Department of Energy
RESPONDER
SUBJECT EQUV
SUBJNUM 031
COMMENT

I.F. Overview of Options

1. p. 43659, col. 2 -- After outlining the three regulatory options being considered by EPA (i.e., for addressing cross-media transfer of hazardous constituents), the Agency states that none of the options would apply to units which satisfy the Minimum Technology Requirements [MTRs] or the statutory no-migration standard.

With respect to the applicability of the three options, DOE supports EPA's intention to exclude units that satisfy MTRs or the no-migration standard. Waste management units meeting MTRs or the no-migration standard are designed and operated to prevent releases of hazardous constituents to the environment, even when they manage wastes containing higher concentrations of hazardous constituents than are likely to be present in decharacterized wastes. For this reason, it should not be necessary to impose additional controls on such units under the LDR Phase IV rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P031
COMMENTS Department of Energy
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 031
COMMENT

1. DOE provided a number of comments (submitted to EPA on May 1, 1995) in response to the Land Disposal Restrictions (LDR) Phase III proposed rule. Several of these comments are pertinent, and therefore reiterated, in regards to topics addressed in the LDR Phase IV proposal.

On March 2, 1995, EPA published the LDR Phase III proposed rule [60 FR 11702]. In part, the preamble discussed potential regulatory approaches being considered by EPA that would address, through controls on cross-media transfers of hazardous constituents, the issue as to whether treatment received by decharacterized wastes in Clean Water Act (CWA) and CWA-equivalent impoundment-based wastewater treatment systems would be equivalent to the RCRA §3004(m) treatment standard. DOE offered several comments in regards to the discussions on cross-media transfer and equivalency issues. Some of these comments are reiterated in this response to the LDR Phase IV proposed rule.

Specific DOE comments made in response to the LDR Phase III proposed rule that are reiterated herein concern: (1) the advisability of adopting, under RCRA Subtitle C (Hazardous Waste Management) authority, regulations applicable to nonhazardous waste management units, especially when existing or forthcoming regulatory programs under other statutes may provide adequate control; and (2) support for applying the change of treatability group principle to sludges generated by impoundment-based CWA wastewater treatment systems that receive decharacterized wastes.

2. With respect to the options presented in the LDR Phase IV proposed rule for addressing potential cross-media releases of hazardous constituents (from surface impoundments managing decharacterized wastes), DOE encourages EPA to choose the regulatory scheme referred to as Option 1.

EPA explains that (based on available information) decharacterized waste streams may contain hazardous constituents at concentration levels of concern, and that such hazardous constituents could potentially be released from surface impoundments handling these waste streams. The Agency also points out that the risks due to cross-media releases could vary from insignificant to significant.

Hence, EPA is considering three regulatory options to address the potential for cross-media transfer of hazardous constituents. Under Option 1, no separate LDR regulations would be issued. Rather, other Agency programs (either existing or future) would be relied upon to address releases. Under Option 2, controls would be promulgated under the LDR program which would apply only to situations where releases pose excessive risks, and the risks are not adequately minimized as a result of other existing or currently planned EPA requirements. Under Option 3, LDR regulations would be adopted that require all decharacterized wastes to be treated to meet Universal Treatment Standards (UTS) before entering any CWA wastewater treatment system surface impoundment.

One of the Department's primary concerns with respect to establishing new requirements to control potential cross-media transfer of hazardous constituents, is that these new requirements not overlap or conflict with standards developed pursuant to other regulatory programs (e.g., RCRA Subtitle D, CWA, Clean Air Act (CAA) requirements). DOE acknowledges that all three options proposed by EPA, if carefully implemented, could avoid dual regulation (and the Department supports this aspect of the options). However, as is indicated more fully in the specific comments below, DOE prefers Option 1 over Option 2 because of concerns about the complexity of the regulatory framework that would be required to implement Option 2, and the Cost of implementation. In fact, DOE believes that the complexity associated with implementing Option 2 would likely compel members of the regulated community, including some DOE sites, to treat decharacterized wastes to meet UTS prior to placing them in surface impoundments, just to avoid the confusion (and accompanying potential for noncompliance). Furthermore, DOE prefers Option 1 over Option 3 because the Department agrees with EPA's assessment that Option 3 would destroy any accommodation between the CWA and RCRA (which the court in *Chemical Waste Management v. EPA* expressly recognized as congressionally intended) and would be very costly to implement, without proportionate risk reduction.

I. Options to Ensure That Underlying Hazardous Constituents in Decharacterized Wastes are Substantially Treated Rather Than Released Via Leaks, Sludges, and Air Emissions from Surface Impoundments

I.B. Background

1. pp. 43655, col. 2 - 43657, col. 2 -- EPA explains that portions of the LDR Treatment Standards promulgated in the Third Third rule (55 FR 22520; 06/01/90) were vacated and remanded by the

District of Columbia Court of Appeals in *Chemical Waste Management, Inc. v. EPA*, 976 F. 2d 2, cert. denied 113 S.Ct. 1961 (1992). EPA indicates that one of the Court's holdings was that "situations where characteristic hazardous wastes are diluted, no longer exhibit a characteristic(s), and are then managed in centralized wastewater management land disposal units (i.e., subtitle D surface impoundments or injection wells) are legal only if it can be demonstrated that hazardous constituents are reduced, destroyed, or immobilized [in the centralized wastewater management system] to the same extent as they would be pursuant to otherwise-applicable RCRA treatment standards." EPA refers to this as an "equivalency demonstration". In the proposed LDR Phase III rule, EPA suggested standards to address one portion of the equivalency demonstration issue (i.e., treatment standards for end-of-pipe discharges from CWA and CWA-equivalent wastewater treatment systems were proposed). Pursuant to a settlement agreement regarding the court's mandate, the Agency is also required to address a remaining issue associated with equivalency of CWA and CWA-equivalent wastewater treatment systems (i.e., options are being considered for regulating cross-media transfer of hazardous constituents from CWA treatment systems to assure that RCRA treatment requirements are not thwarted).

a. In response to the LDR Phase III proposed rule, DOE expressed concern that, although the preamble language indicated that the final rule will apply only in situations where decharacterized wastes are being managed in CWA, CWA-equivalent (including zero-discharge), or other non-hazardous wastewater treatment systems involving surface impoundments, the actual scope encompassed by the proposed regulatory language was much broader. As a result of the breadth of the proposed regulatory language, DOE is concerned that the treatment standards established by the LDR Phase III rule for end-of-pipe discharges from CWA, CWA-equivalent and other non-hazardous wastewater treatment systems receiving decharacterized wastes might be applied to outputs from certain integral facilities of the DOE Savannah River Site's (SRS) treatment system for mixed high-level wastes. These integral facilities are CWA-permitted facilities without liquid discharges that could be construed as administering CWA-equivalent treatment. Because the LDR Phase III rule has not yet been finalized, and the proposed LDR Phase IV rule sets additional requirements to control releases of hazardous constituents via air emissions, sludges and leaks from the same wastewater treatment systems as were addressed by the LDR Phase III proposed rule, DOE is now concerned that the

LDR Phase IV final rule could also be applied in the case of the CWA-permitted integral facilities of the SRS mixed high-level waste treatment system. It is DOE's understanding that this concern may be alleviated by a clarification that EPA intends to include in the LDR Phase III final rule, but since DOE is not yet aware of the exact nature of the clarification, the Department offers below, and in Attachment A, additional information concerning the SRS situation. Alternatives that EPA might adopt to allay DOE's concerns are also provided.

Since EPA has stated in preamble language that the LDR Phase III and Phase IV rules are intended to apply to CWA and CWA-equivalent wastewater treatment facilities utilizing surface impoundments, DOE suggests the three alternatives described below for EPA's consideration as possible ways to achieve the clarification requested above. DOE requests that EPA adopt combination of the first two alternatives in order to comprehensively address the Department's concerns.

Alternative 1 -- Clarify the Regulatory Language Defining the Scope of the LDR Phase III RULE

DOE suggests that the language proposed for codification in 40 CFR 268.39(b) by the LDR PHASE III notice of proposed rulemaking (60 FR 11742) be changed to clearly state that decharacterized wastes managed in surface impoundments are the wastes to which the new restrictions from land disposal apply. The following modifications are recommended:

§268.39 Waste specific prohibitions -- spent aluminum potliners, carbamates and organobromine wastes.

* * *

(b) On [Insert date two years from date of publication of the final rule], characteristic decharacterized wastes that are managed in systems a surface impoundment whose discharge is regulated under the Clean Water Act (CWA), or decharacterized wastes that are managed by zero dischargers in surface impoundments that engage in CWA-equivalent treatment before ultimate land disposal, are ...

* * *

Alternative 2 -- Specifically exclude certain CWA and CWA-equivalent wastewater treatment facilities from the LDR Phase III and Phase IV rules

DOE suggests that EPA also consider specifically excluding from the LDR Phase III and Phase IV rules (regardless of which Phase IV option EPA chooses to adopt) facilities like the SRS Saltstone

Processing and Disposal Facilities that are permitted under State-implemented CWA AND solid waste disposal legislation, but that have no surface impoundments, no "end-of-pipe" discharge to surface waters or to publicly owned treatment works (POTWs), and no permitted outfall locations. It appears that EPA does not intend such facilities to be regulated by either the LDR Phase III or the LDR Phase IV rules. Nevertheless, since EPA has not specifically proposed excluding facilities of this type, DOE is uncomfortable that future interpretations of applicability may somehow result in the inappropriate application of LDR controls. For this reason, DOE requests that EPA consider incorporating specific exclusions in both the LDR Phase III and LDR PHASE IV final rules.

Alternative 3 -- Adopt the proposed LDR Phase IV, Option 1
The proposed LDR Phase IV rule offers three options for adding (to the end-of-pipe standards proposed by the LDR Phase III rule) controls on hazardous constituent releases in air emissions, sludges and leaks from CWA and CWA-equivalent surface impoundments that manage decharacterized wastes. Under Option 1, EPA proposes that no added controls be mandated. Instead, existing or forthcoming regulatory mechanisms which tend to protect against releases would be relied upon. Included among the federal and State regulations which the proposed LDR PHASE IV preamble describes as possibly providing control of excessive releases from surface impoundments receiving decharacterized wastes are those under RCRA §3004(u) requiring that corrective action be performed to remediate releases of hazardous constituents from solid Waste Management units at permitted RCRA treatment, storage, or disposal facilities (TSDFs) [60 FR43659, col. 3]. The preamble notes that surface impoundments which manage Decharacterized Wastes at RCRA TSDFs would meet the definition of a solid waste management unit. A similar approach, with regard to surface impoundments receiving decharacterized wastes at RCRA TSDFs, is also proposed as a component of Option 2 [see 60 FR 43660, col. 3 - 43661, col. 1].

The SRS is operated as a RCRA TSDF under a site-wide permit. As such, all solid Waste Management units at the SRS site (including those located within the Saltstone Processing and Disposal Facilities) are subject to corrective action requirements under RCRA §3004(u). Therefore, although the SRS Saltstone Facilities are not impoundment based, if EPA chooses to implement the proposed LDR Phase IV rule, Option 1, it appears that such SRS Facilities would not be subjected to added controls for the purpose of

containing certain hazardous constituent releases. For this reason, DOE supports the adoption of Option 1 in order to alleviate concerns about the applicability of the LDR Phase IV rule to the SRS Saltstone Facilities.

The adoption by EPA of the proposed LDR Phase IV rule, Option 1 would similarly alleviate DOE's concerns about added controls on the SRS Saltstone Processing and Disposal Facilities if State environmental controls on facilities that receive decharacterized wastes, such as groundwater monitoring for hazardous constituents and cleanup authorities, were recognized as a basis for not subjecting the Saltstone Facilities to such added controls. EPA mentions this approach in the proposed LDR Phase IV rule, Option 1 preamble [60 FR 43660, cols. 1&2]. The Saltstone Processing and Disposal Facilities operate, respectively, under a SCDHEC Industrial Wastewater treatment Facility permit and a SCDHEC Industrial Solid Waste Disposal Facility permit. These permits require periodic Toxicity Characteristic Leaching Procedure (TCLP) analyses to insure that no hazardous waste is placed into the concrete vaults. Equally important, the State requires that ground water monitoring wells be installed around the disposal vaults. This monitoring is routinely performed to identify potential releases from the vaults. If releases are identified, corrective measures must be investigated. Therefore, the SCDHEC permit conditions require the SRS Saltstone Facilities to routinely demonstrate compliance with State requirements that the proposed LDR Phase IV rule preamble recognizes as potentially sufficient to satisfy the need for added controls on CWA and CWA-equivalent wastewater management systems in order to contain certain hazardous constituent releases. Hence, DOE urges EPA to adopt the proposed LDR Phase IV, Option 1, with recognition of the South Carolina wastewater treatment operating standards as sufficient to provide any necessary added controls. This would alleviate DOE's concerns about the applicability of the LDR Phase IV rule to the SRS Saltstone Facilities.

I.C. Applicability of Potential Approaches to "Industrial D" Management Units

1. p. 43657, col. 2 -- EPA states that the three options being considered in the proposed rule to ensure that underlying hazardous constituents in decharacterized wastes are substantially treated rather than released via leaks, sludges and air emissions from surface impoundments will specifically apply to Subtitle D (nonhazardous) surface impoundments that receive decharacterized wastes.

As DOE has indicated in response to previous LDR-related notices, the Department is concerned with the potential proliferation of overlapping regulatory requirements developed pursuant to different statutory authorities. The occurrence of such overlapping environmental requirements under separate regulatory programs should be avoided to minimize confusion within the regulated community and to eliminate conflicting standards. With this concern in mind, DOE continues to encourage EPA not to impose RCRA Subtitle C requirements on waste management units which are not managing hazardous wastes. Instead, if regulations on leaks, air emissions and sludges from Subtitle D surface impoundments managing decharacterized wastes are deemed necessary to ensure treatment of underlying hazardous constituents, DOE believes these regulations should be implemented under RCRA Subtitle D (40 CFR part 258, or another appropriate Subtitle D set of regulations) for leaks and the Clean Air Act (CAA) for volatilization, rather than in the LDR program under RCRA Subtitle C (40 CFR part 268).

require an evaluation in accordance with RCRA corrective action regulations to determine whether releases from those units pose a threat to human health and the environment. Considering the coverage offered by these other regulatory programs (i.e., CAA, RCRA Corrective Action, State environmental programs, and others), DOE believes Option 1 will provide protection that is basically comparable to Option 2 -- but will be less costly to implement because of the reliance on existing and planned regulations. standard.

THIS TEXT IS IN THE WRONG PLACE!

I.G. Option 1

1. p. 43659, col. 2 -- EPA describes Option 1, which relies on the end-of-pipe standards proposed in the LDR Phase III rule to satisfy the requirement articulated by the court in *CWM v. EPA*, that treatment of decharacterized wastes in impoundment-based CWA wastewater management systems to address underlying hazardous constituents (UHCs) must be equivalent to treatment that would otherwise be administered under RCRA. EPA also describes how federal and State regulations may otherwise provide for control of excessive releases due to air emissions, sludges and leaks from surface impoundments receiving decharacterized wastes.

As DOE has commented in response to previous notices regarding the LDR program, the Department is concerned that proliferation of overlapping regulatory requirements (stemming from various

statutory authorities) should be avoided to minimize confusion within the regulated community and to eliminate conflicting standards. DOE has also previously urged EPA not to establish equivalency demonstration requirements in response to *CWM v. EPA* that go beyond demonstrating end-of-pipe equivalence. Consistent with these earlier comments, DOE now supports Option 1 (i.e., not to issue additional requirements under the LDR program, but rather to rely on other federal and State regulatory programs). As EPA indicated in the preamble, a number of other federal and State regulations already provide environmental controls on surface impoundments that receive nonhazardous wastewaters. For example, there are CAA regulations that have been promulgated or are under development which impose controls on hazardous air pollutants (e.g., the Hazardous Organics National Emission Standards for Hazardous Air Pollutants (NESHAP)) and would apply to certain CWA impoundment-based treatment systems. Furthermore, surface impoundments that manage decharacterized wastes are solid waste management units when they are co-located with a unit subject to a RCRA permit. In this case, all releases from such units will require an evaluation in accordance with RCRA corrective action regulations to determine whether releases from those units pose a threat to human health and the environment. Considering the coverage offered by these other regulatory programs (i.e., CAA, RCRA Corrective Action, State environmental programs, and others), DOE believes Option 1 will provide protection that is basically comparable to Option 2 -- but will be less costly to implement because of the reliance on existing and planned regulations.

I.H. Option 2

1. p. 43660, col. 2 -- EPA lists seven objectives that the Agency tried to accomplish in defining regulatory Option 2 for controlling leaks, sludges and air emissions from impoundment-based CWA wastewater treatment systems. Included among this list are the following three objectives: focus controls on those situations that present risks that amount to significant permanent disposal; avoid duplication with other EPA requirements; and, minimize implementation burden.

DOE approves of EPA's efforts to avoid duplication of other requirements, as indicated in the preceding comments. The Department also appreciates EPA's efforts to focus only on higher risk situations. However, it appears that the Agency's effort to minimize implementation burdens may fail in regards to this option. In fact, DOE believes that the implementation approaches associated

with Option 2 could be expensive, and so complex that members of the regulated community, including some DOE sites, would likely elect to treat decharacterized wastes to meet UTS prior to placing them in surface impoundments (just to avoid the confusion and the accompanying potential for noncompliance). More specific information about this concern is provided below.

I.H.2 Applicability

1. p. 43660, col. 3 --EPA explains that the management standards being considered under Option 2 (for leaks, sludges and air emissions from surface impoundments accepting decharacterized waste) would be applicable to certain facilities (or wastes) which are not addressed by other EPA regulatory programs or which do not meet proposed criteria for screening out low risk situations. Since EPA is not proposing actual regulatory language, it is unclear exactly how Option 2 would be implemented. However, it appears that implementation could greatly complicate the management and treatment of decharacterized waste streams, especially in the area of deferrals to existing regulatory requirements, or requirements under development. For example, EPA states for air emissions that:

- Standards (unspecified) regulating total volatile organics will be considered to adequately cover air emissions of UHCs.
- Facilities subject to CAA standards for hazardous air pollutants will not be covered by Option 2.
- Facilities subject to CAA standards that are under development will not be covered by Option 2.

DOE requests clarification as to how EPA will evaluate individual impoundment-based CWA WASTEWATER treatment systems to determine whether any of these deferrals apply. Will each facility be required to make its own determination and file a certification?

If so, how will individual facilities know whether they will be covered by standards that are still being developed?

Will EPA adopt additional standards under the LDR program for facilities that are not eligible for deferrals? If so, will facilities have the option to demonstrate compliance with such LDR standards in lieu of seeking deferrals, even though they may qualify for deferrals? DOE believes that determining whether deferrals are available to facilities could become a complex process. Therefore, facilities may feel compelled to comply with promulgated LDR standards instead of seeking deferrals, in order to ensure proper compliance and avoid mistakes involving regulatory interpretation.

DOE has similar concerns about deferrals related to sludges and

releases to ground water.

In addition to deferring regulation of facilities to other programs, EPA mentions that it expects to exclude certain wastes and waste management facilities from control under Option 2 LDR regulations because such wastes and facilities present low risk. DOE supports this concept, but again, it is unclear how these criteria for screening out low risk situations will be specifically implemented. For example, will the exclusions all be self-implementing so that facilities to which the Phase IV rule applies will simply need to maintain adequate records on-site to demonstrate applicability? Or will facilities be required to submit certification either with or without supporting documentation?

Because of the concerns stated above, DOE encourages EPA not to choose Option 2 for regulating surface impoundments that receive decharacterized wastes. While Option 2 attempts to focus the applicability of proposed management standards on a smaller subset of situations (i.e.,

by excluding wastes and facilities that do not present excessive risk, and deferring wastes and facilities covered by other regulatory programs), DOE believes any advantages of this approach could be lost because both regulators and the regulated community would be confounded by the complicated implementation scheme. Further, if the implementation scheme turns out to be as complex as DOE believes it could, adopting Option 2 would seem to contradict EPA's goals to "simplify and streamline" the LDR program in order to make it more efficient and easier to implement.

It is also questionable whether the development of such a complicated regulatory framework is warranted when considering the overall environmental risks associated with the management of decharacterized waste in CWA treatment systems.

b. DOE requests clarification of the sentence which reads:

"However, substantive requirements, borrowed from [40 CFR Part 264, Subpart CC], could apply to surface impoundments receiving prohibited, decharacterized wastes." In the sentence that immediately precedes this one in the preamble, EPA states that Subpart CC rules would not apply directly to surface impoundments covered by LDR Phase IV. Does this mean that, if EPA goes forward with Option 2, the Agency will promulgate LDR regulations in 40 CFR Part 268 which essentially copy certain sections of 40 CFR Part 264, Subpart CC? Or, will selected sections of the Subpart CC regulations be referenced? DOE suggests that, if EPA goes forward with a regulatory approach that applies certain

requirements from Subpart CC to surface impoundments covered by the LDR Phase IV rules, referencing pertinent sections of Subpart CC would be preferable to creating a duplicate set of regulations.

I.H.4.c. Surface impoundment management standards

1. p. 43669, col. 2 -- Initially in section I.H.4.c of the preamble, EPA states that "[t]he Agency is proposing to use annual sampling of the wastewaters in the surface impoundment to determine if regulated constituents (i.e., UHCs) are present at concentrations that exceed the trigger level" (emphasis added). EPA states that UHCs are to be determined by characterizing each new decharacterized wastewater at its point of generation. Later, EPA states that "[t]o determine if a trigger level has been exceeded, the owner or operator would calculate an annualized average concentration for each regulated constituent identified" (emphasis added). It is further explained that a minimum of four sampling events (i.e., quarterly) would be required for calculating the annualized average concentration.

If EPA chooses Option 2 for regulating surface impoundments that manage Decharacterized Wastes, DOE requests that EPA clarify in the final rule whether impoundment sampling will be required annually, or four times per year (i.e., quarterly) in order to support calculation of an annualized average. DOE suggests that, rather than quarterly, each facility be required to sample in a manner and at a frequency which appropriately reflects the nature of the wastewaters and operations undertaken at the facility, and that an annualized average (based on such sampling) be used to evaluate whether the trigger levels have been exceeded.

I.H.4.d. Ground water and corrective action management standards

I.H.4.d.i. MSWLF rule

1. p. 43670, cols. 1&2 -- EPA proposes to adopt only the self implementing provisions of the Municipal Solid Waste Landfill (MSWLF) rule, but seeks comment on whether the multi-unit provision (allowing state approval of a multi-unit ground-water monitoring system based on site-specific considerations) and any other site-specific provisions in the MSWLF rule should be allowed to be self-implemented.

DOE agrees that multi-unit monitoring may be the most efficient and reasonable approach in circumstances involving closely spaced surface impoundments. Therefore, if EPA chooses Option 2 to regulate surface impoundments that manage decharacterized wastes, DOE would support including regulatory language flexible enough to allow facilities to use multi-unit ground-water monitoring when appropriate (i.e., when such a ground-water monitoring system is as

protective of human health and the environment as an individual monitoring system). Furthermore, DOE would favor making such regulations self-implementing.

I.H.4.d.ii. Ground water monitoring

1. p.43670, col. 2 -- EPA proposes to require that, within one year of triggering groundwater monitoring, the owner/operator install a ground water monitoring system and begin monitoring. DOE believes that designing, installing and beginning operation of a ground water monitoring system within one year of detection of regulated levels of hazardous constituents in a surface impoundment will be difficult for federal facilities for budgetary reasons.

Federal facilities need at least one year to allocate funding for new activities. Therefore, DOE suggests that EPA allow owner/operators to submit requests for extensions beyond the one year limit for installing a ground water monitoring system. Alternatively, EPA could allow the ground water monitoring system installation schedule to be negotiated on a case-by-case basis.

2. p. 43671, cols. 1 & 2 -- EPA indicates that owner/operators would be required to move directly to an assessment of corrective measures upon detecting statistically significant levels of UHCs above the constituent-specific ground water protection standards as determined by 40 CFR 258.55(h) of the MSWLF rule.

DOE believes that the ground-water monitoring program under Option 2 (if implemented) should provide an opportunity for rebuttal of the presumption that assessment of corrective measures is required upon detecting UHCs in the ground water at statistically significant levels above the constituent-specific ground water protection standards as determined by § 258.55(h). Incorporating such a provision would be consistent with regulations proposed by EPA for corrective action of solid waste management units (SWMUs) at hazardous waste management facilities [see Preamble to Proposed 40 CFR Part 264, Subpart S, 55 FR 30798, 30814, cols. 2 & 3 (07/27/90)]. Under the proposed Subpart S regulations, permittees of RCRA treatment, storage and disposal facilities would be allowed to rebut the presumption that a corrective measure study is required when action levels are exceeded in ground water. For example, a rebuttal might be successful if the permittee established that the contamination did not result from leaks in the surface impoundment, or that risk from the constituents being released was within an acceptable range. DOE favors basing corrective action decisions on the potential for threats to human health and the environment.

I.H.4.d.iii. Integration of Option 2 with existing programs

1. p. 43671, col. 3 -- EPA observes that many of the facilities that would be subject to the requirements of Option 2 will be undergoing ground water monitoring and corrective action under existing state or federal authorities. The Agency states that it will defer to such programs if they are substantially similar to the Option 2 ground water and corrective action management standards (i.e., the programs include the UTS constituents of concern, and have substantially similar requirements regarding the monitoring wells and the frequency of monitoring).

EPA has not proposed a mechanism whereby facilities can ascertain whether ongoing ground-water monitoring and/or corrective actions are "substantially similar" to the Option 2 program. DOE requests that the final LDR Phase IV rule provide clarification as to what constitutes a finding of substantial similarity (i.e., identify the associated criteria), and how and by whom a determination will be made that existing ground water monitoring and corrective action requirements at a facility are substantially similar. Since DOE funds are limited, the Department is especially concerned about how new ground water monitoring requirements will be integrated with the existing requirements under CERCLA, consent orders, and compliance agreements at DOE facilities.

2. p. 43672, col. 1 -- EPA requests comment on whether, as an alternative to requiring facilities to commence directly with a corrective measures assessment upon detecting UHCs in the surface impoundment (at levels "above regulatory concern"), the requirement should be to undertake a detection monitoring program. Under this alternative, if trigger levels were exceeded in the surface impoundment, groundwater monitoring would be required for a set of indicator parameters that provide a reliable indication of the presence of hazardous constituents. The focus of the initial ground water monitoring, therefore, would be the detection of releases, rather than the detection of site-specific UHCs that are regulated.

DOE would support a program that allowed confirmation of a release before requiring assessment of corrective measures.

I.I Option 3

1. p. 43675, col. 3 -- EPA indicates that a third option, Option 3, for addressing the potential problem of releases of hazardous constituents from decharacterized wastes in surface impoundments would be to require wastes to meet UTS for the UHCs before entering the impoundment (unless the impoundment met MTRs or was qualified for a "no-migration" exemption). EPA expresses its view that

Option 3 should not be the exclusive approach for reasons of law and policy.

DOE agrees that treatment of characteristic wastes to meet UTS for UHCs should not be adopted as the exclusive method for addressing the potential problem of releases of hazardous constituents from decharacterized wastes in surface impoundments. As EPA has stated, adoption of the approach presented by Option 3 would be contrary to the position held by the D.C. Circuit (in *CWM v. EPA*) that "RCRA requires some accommodation with the CWA." Also, requiring all treatment of characteristic wastes to occur upstream of CWA, CWA-equivalent and other nonhazardous impoundment-based wastewater treatment systems reduces flexibility of Waste Management operations. As previously stated, DOE favors Option 1.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P031
COMMENTS Department of Energy
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3. DOE suggests that EPA publish for comment a supplemental notice of proposed rulemaking indicating the option selected for addressing cross-media transfers of hazardous constituents from impoundment-based CWA, CWA-equivalent and other nonhazardous wastewater treatment systems covered under the LDR Phase IV rule. The supplemental notice should include EPA's suggested regulatory language for implementing the selected option. While DOE recognizes that EPA may not be legally required to solicit public comment on actual proposed regulatory language for implementing the selected option for addressing cross-media transfers from the surface impoundments covered by LDR Phase IV, the Department believes that EPA and the regulated community would benefit if EPA sought such comment. Providing the regulated community with the opportunity to examine and respond to proposed regulatory language would serve to reduce or minimize problems with the implementation of any new requirements.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such

regulation.

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COMMENTS Department of Energy
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I.H.3. Proposed Management Standards for Air Emissions

1. p. 43663, col. 3 -- EPA explains that Option 2 would borrow requirements from 40 CFR Part 264, Subpart CC regulations to develop standards for air emissions from surface impoundments in CWA, CWA-equivalent, or other nonhazardous wastewater treatment systems accepting decharacterized wastes. The proposed air emission standards would apply only if the decharacterized waste (containing UHCs above UTS at the point of generation) placed in the unit is determined to have an average volatile organic concentration greater than or equal to 100 ppmw based on the organic composition of the waste at the point of generation.

a. In previous comments, DOE has expressed concern about extending the applicability of RCRA Subtitle C air emission controls to nonhazardous waste management facilities, such as surface impoundments in CWA, CWA-equivalent or other nonhazardous wastewater treatment systems, as part of the LDR Phase IV rule. DOE continues to question whether EPA has authority under RCRA Subtitle C to impose controls on air emissions from nonhazardous waste management facilities.

As was stated in the Department's earlier comments on the LDR Phase III proposed rule, EPA promulgated 40 CFR Parts 264, Subpart CC and 265, Subpart CC based on specific authority to regulate air emissions from hazardous waste treatment, storage and disposal facilities (TSDFs) granted by the Hazardous and Solid Waste Amendments of 1984, which added §3004(n) [Air emissions] to RCRA Subtitle C. Additionally, EPA had determined that existing and future Federal standards under the CAA and State air standards would not adequately address the control of organic emissions from such TSDFs [59 FR 62906, col. 2-3 (Dec. 6, 1994)].

Similar circumstances are not present to justify adopting controls on surface impoundments in CWA, CWA-equivalent, or other nonhazardous wastewater treatment facilities that receive only nonhazardous and decharacterized wastes. To the contrary, on its face, RCRA §3004(n) does not apply to the nonhazardous waste management facilities which will be the subject of the LDR Phase IV rule. Further, the court in *CWM v. EPA* made no ruling requiring EPA to conclude that Congress intended RCRA §3004(n) to extend to

nonhazardous waste management facilities. Meanwhile, §112 of the CAA establishes authority whereby EPA can regulate hazardous air emissions from nonhazardous waste management facilities, and RCRA §1006(b) requires EPA to coordinate its regulations under RCRA with the CAA, and to avoid duplication, to the maximum extent practicable. Based on this analysis, DOE continues to believe that EPA may not be authorized by RCRA Subtitle C to impose requirements on surface impoundments in CWA, CWA-equivalent and other nonhazardous wastewater treatment facilities simply because they receive decharacterized wastes. Therefore, DOE again urges EPA to defer regulation of air emissions from such surface impoundments to the appropriate CAA regulatory program.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Risks from air emissions will be considered in this study. The commenter is correct in noting that Parts 264 and 265, subparts CC, of 40 CFR regulate certain air emissions from hazardous waste management units such as surface impoundments, as well as all units downstream from the point of introduction of a specific hazardous waste, until such time that treatment of the volatile organic chemicals occurs. The subpart CC requirements are limited to specific volatile organic chemicals present at greater than 100 ppmw in these hazardous wastes. EPA cannot predict at this time whether additional volatile or semi-volatile organics not addressed by the subpart CC requirements may pose a potential risk to human health and the environment. EPA may consider additional requirements for air emissions from hazardous waste management units if such

requirements are indicated by the risk assessment.

NOTE TO EPA: Do we need to respond to commenter's assertion that RCRA §3004(n) does not apply to non-hazardous waste management facilities?

DCN PH4P031
COMMENTS Department of Energy
RESPONDER SS
SUBJECT EQUV
SUBJNUM 031
COMMENT

I.H.7. Sampling and Analysis

1. p. 43675, cols. 2 & 3 -- EPA states that sampling and analysis requirements under Option 2 would not be burdensome, and that generator knowledge could be used in lieu of sampling and analysis. Section I.D.3.c is indicated as discussing what constitutes acceptable generator knowledge.

DOE supports allowing generator knowledge as an alternative to sampling and analysis. For that reason, the Department is interested in EPA guidance on what constitutes acceptable generator knowledge. Since the LDR Phase IV proposed rule contains no section I.D.3.c providing such guidance, DOE requests that, if Option 2 is chosen, EPA include in the preamble to the final rule, the guidance it intended to put in section I.D.3.c. of the proposed rule preamble.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

The Agency previously provided guidance on what constitutes generator knowledge in the Phase II proposed rule at 58 FR 48111 (September 14, 1993).

DCN PH4P031
COMMENTS Department of Energy
RESPONDER SS
SUBJECT EQUV
SUBJNUM 031
COMMENT

4. DOE suggests that, in order to avoid possible confusion, EPA define the term "decharacterized wastes," since receipt of such wastes designates the surface impoundments to which the LDR Phase IV rule applies.

DOE suggests that the terms "decharacterized wastes" and "decharacterization" may not be entirely self-explanatory.

Therefore, since these terms are repeatedly used in the preamble of the LDR Phase IV proposed rule to delineate the surface impoundments to which the proposed rule will apply, DOE believes it would be helpful to the regulated community if one or both terms were defined, either in 40 CFR 260.10 or 40 CFR 268.2.

RESPONSE:

EPA uses the term "decharacterized" in describing wastes that no longer exhibit one or more of the characteristics of hazardous waste. Decharacterized wastes are wastes that have been treated, permissibly diluted, aggregated or otherwise altered so that the waste no longer exhibits a hazardous waste characteristic (e.g., decharacterized). The hazardous waste characteristics are defined in 40 CFR Part 261, subpart C. Given EPA's general use of the term to describe a broad universe of wastes (rather than using the term to designate a specific waste type), and given that the Agency received no other comments pointing out any ambiguities with the term, the Agency does not feel compelled to define the term within the Code of Federal Regulations at this time.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P031
COMMENTS Department of Energy
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RESPONSE:

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However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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DCN PH4P033
COMMENTS CMA Carbon Disulfide Panel
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 033
COMMENT

The Panel urges EPA to adopt Option 1 as set forth in the proposed rule -- not promulgated land disposal restrictions (LDR) requirements for air emissions, leaks to ground water, sludges, or wastewater discharges. EPA has acknowledged that the phase IV rule addresses relatively minor risks.² Implementing Option 1 would fully address these minor risks.

Moreover, *Chemical Waste Management v. EPA* 3 requires EPA to select Option 1. At the very least, Option 1 is consistent with the *Chemical Waste Management* decision. In addition, and as discussed in the comments separately submitted by CMA, the equivalency of existing and forthcoming Clean Air Act and Clean Water Act regulatory programs will ensure the protectiveness of Option 1. Finally, if EPA nonetheless decides to adopt Option 2, the Panel urges EPA to make the modifications to Option 2 proposed by CMA in its comments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P034
COMMENTS CMA
RESPONDER
SUBJECT EQUV
SUBJNUM 034
COMMENT

Minimize the Impact of the Phase IV Proposed Rule on Facilities with Approved No Migration Exemptions

CMA member companies operate approximately 120 Class I injection wells, two thirds of which inject hazardous waste and have obtained no migration exemptions. The cost of petition modification has become an enormous burden for injection well operators. The average cost to complete the no migration exemption process has been \$876,000 with almost half of the facilities incurring costs exceeding a million dollars. Many of these petitions were modified due to changes in regulatory requirements such as are contemplated in today's rule. These modifications have resulted in an additional \$206,000 per facility on average. The costs reported herein do not reflect the costs incurred by the Agency to review and process the petitions. The UIC Group believes that many of the petition modifications that have been required, and might be required, are not only unnecessary, but are unwarranted to satisfy the intent of the no migration exemption provisions. EPA should recognize the strong scientific and technical foundation on which the Agency has based its conclusions that injection into Class I wells is a safe and effective waste management tool. Class I wells are thoroughly regulated, particularly those wells that have completed the no migration exemption process. EPA should not waste resources to further regulate these Class I wells, since EPA's own comprehensive comparative risk assessment determined that injection of waste is virtually the safest form of disposal and is safer than landfilling the waste, incinerating the waste, or even storing the waste in a tank.

Restrictions on Decharacterized Wastes Should Not Affect Facilities With Approved No Migration Exemptions. EPA has the authority and has already committed to allowing facilities that have obtained no migration exemptions to be exempt from specific further regulations. EPA and the UIC Group agreed to settle a lawsuit by signing a settlement agreement which confirms that facilities with approved no migration exemption that does not change the waste stream injected will not be affected by LDRs which affect decharacterized wastes. Given the fact that the entire waste stream was evaluated during the petition process, approved no migration petitions address any characteristic wastes that may be rendered nonhazardous prior to injection. Consequently, it is unnecessary to layer additional requirements onto these facilities. Even though EPA continues the process of refining the LDR program, the injectate has not changed and the conclusions of the no migration petitions remain valid. Changes

to the definition of the point of generation and to the definition of characteristically hazardous wastes should not force the facilities that have approved no migration petitions to submit additional modifications. These additional modifications provide no extra protection or benefit to the environment. In short, it is clear that: "...characteristic wastes that cease to exhibit a characteristic prior to injection are exempted from the land disposal prohibitions to the same extent as hazardous waste injection into Class I wells with Agency-approved no-migration exemptions, regardless of whether the applicable waste codes for the characteristic are specified in the final petition's approval. No further demonstration would be required for characteristic wastes that are rendered nonhazardous prior to injection absent the introduction of a new constituent not already considered in the demonstration." The Phase IV proposal should not result in the need for facilities to modify petitions even though the injected waste has not changed and the waste at the point of injection is not characteristically hazardous. EPA can prevent this misuse of public and private funds by clarifying that the LDRs do not affect Class I wells that inject decharacterized wastes and that have obtained no migration exemptions. The proposed requirement to impose additional regulatory burdens for newly-identified TC metal wastes is especially disconcerting because EPA is merely requiring an alternative extraction procedure and is not changing the constituents of concern. In the Third LDR rule, EPA established treatment standards for wastes that were characteristically hazardous wastes as determined by the Extraction Procedure (EP). EPA now requires use of the Toxic Characteristic Leaching Procedure (TCLP) to determine whether wastes containing metals are characteristically hazardous. The change in extraction procedures will result in some additional wastes being captured by the LDRs that previously had been evaluated and had been determined to be nonhazardous. These wastes will become regulated even though EPA has not changed the constituents of concern, but rather the method used to determine the concentration present, and is now proposing to regulate these wastes as newly-listed wastes. Fundamentally, wastes that are hazardous due to elevated levels of metal constituents were evaluated during the petition process based upon the definition that was current at the time of petition preparation. The injectate, at the point of disposal, was analyzed for metals and that analysis was included in the petitions. Requiring modifications of petitions due to the minor changes in analytical procedures will not result in greater protection of human health and the environment but will result in additional expenditures by both facilities and EPA. As previously discussed, the petition modification process is costly with the average petition modification price of \$206,300. These facilities have already demonstrated that the injected waste will remain safely confined within the injection zone, beneath the confining zone, and separated from the lowermost source of any potentially usable groundwater. Approved petitions have already addressed the potential for migration of hazardous constituents from the injection zone. The change proposed in the

applicability of treatment standards to waste streams already described in the no migration petitions does not affect the technical basis for the petition approval; therefore, it is unnecessary to require petition modifications. This type of regulatory scenario, refinements to the LDRs that result in additional waste codes that are applicable to the injectate even though there has been no change in the injectate, was anticipated, and both CMA and EPA agreed that petition modifications would not be required. EPA should, therefore, clarify in the Phase IV rule that the prohibitions for newly-listed wastes will not result in the need to modify approved no migration exemptions for those facilities at which the waste streams injected have not changed. Absent a Change in the Waste Injected, Facilities with Approved No Migration Exemptions Should, at a Minimum, be Entitled to Add Waste Codes for Newly-Identified or Characteristic Wastes as Nonsubstantive Revisions. In some cases, facilities with approved exemptions describing the waste streams inject either newly-listed wastes or characteristic wastes that are not decharacterized prior to injection. These facilities have not changed the waste streams injected; however, the Agency has proposed to change the basis for the applicability of waste codes. In such cases, EPA may prefer to ensure that the approved exemption reflects all of the waste codes that actually apply to the waste at the point of injection. This is merely a paperwork change that does not raise technical issues that warrant the need to modify the petition and to review the basis for granting the exemption. No migration petitions include detailed descriptions of the injectate including chemical analysis to identify hazardous constituents. Although some petitions may not include detailed descriptions of the individual streams that are aggregated to form the injectate, these petitions do include descriptions of the pretreatment systems, identification of the source of the various streams and, using the definitions applicable at the time of petition preparation, identification of the applicable waste codes for individual waste streams. The evaluation of the potential for migration from the injection zone is appropriately based upon the concentrations present in the injectate and not in the individual streams that are aggregated prior to injection. The injectate is typically a wastewater, and even if it is considered a nonwastewater for LDR purposes it is aqueous, and the determination of metals present in the injectate is based on analysis of an aliquot from the waste rather than analysis of the extract from a leaching procedure. Therefore a change in the extraction procedure used to determine the applicability of waste codes to the individual streams, will, at most, have a trivial impact on the evaluation of the potential for the injectate migrating from the injection zone. EPA should therefore confirm that, absent a change in the wastes injected, facilities with approved petitions should be able to add the waste codes by nonsubstantive revision. CMA Supports Changes in Notification Requirements that Reduce the Reporting Burden for Facilities Disposing of Waste into Injection Wells with Approved No Migration Exemptions. EPA is proposing to modify existing regulatory language to clarify the existing notification requirements, and generally simplify the

requirements for generators of hazardous waste. These changes will replace the existing language in 40 C.F.R. §268.7. Specifically, for Class I injection well operators, EPA is proposing to simplify the notification requirements. Under the current regulations (promulgated in the Phase II rule and not yet published in the C.F.R.), notifications are required to include the waste code and regulated constituents for all restricted wastes. The Phase IV proposal would eliminate the requirement that regulated constituents be identified on the LDR notification for wastes injected pursuant to no migration exemptions. This is appropriate since the no migration petition includes a description of the waste stream and the hazardous constituents in the waste stream. The requirement to further analyze and report information about the waste streams would not protect the environment but would result in added costs for analytical support and documentation. This change will save considerable time and analytical costs without sacrificing protection of human health and the environment and is supported by the UIC Group. Further, the UIC Group recommends that EPA finalize the proposed improvements to the existing LDRs program separately from the rest of the LDR Phase IV proposal. EPA Should Ensure Adequate Time for Compliance Most of the facilities that currently inject newly-identified wastes will attempt to continue to inject these streams and will apply for either a no migration exemption or a modification of a no migration exemption. The no migration exemption review process has taken an average of three years to complete. Similarly, the installation of on-site treatment, source reduction, and/or recycling facilities may take several years to complete, especially if it is necessary to obtain permits before installation. Off-site management options may be logistically infeasible or require the construction of on-site facilities to make them feasible. The construction of transfer facilities may require permits resulting in operation delays of several years. Therefore, EPA should provide adequate time to achieve compliance with the Phase IV requirements. Due to the uncertainty of the outcome of issues described in preambles of the Phase III and Phase IV proposals, such as the point of generation definition, facilities remain confused as to the applicability of these proposed prohibitions. Compliance options are expensive (typically in the millions of dollars per facility); even preparation of an exemption request can cost between \$250,000 and \$1.5 million. Committing large expenditures based upon proposed rules which are subject to change before promulgation results in unnecessary (and sometimes significant) costs to companies. Therefore, even though all of the options described above have long lead times, most companies will await the publication of regulations to begin pursuing compliance options. A more reasonable approach to achieving compliance would be for EPA to allow facilities which submit an exemption request within a reasonable time frame (e.g. within 90 days after the effective date of the LDRs) to continue to operate until two years after a determination is made by EPA whether to grant an exemption. This is permissible within the LDR framework for characteristically hazardous wastes, because although EPA is calling these wastes newly-listed, EPA is actually making

technical corrections to clarify the applicability based upon alternative analytical procedures and making technical corrections which will modify the implementation of existing restrictions. The Most Recent Revision of the De Minimis Wastewater Exemption Needs Further Modification to Assure Reasonable Analytical Costs for Compliance and Should be Applicable to All Class I Wells not Just to Those Injecting Nonhazardous Wastes. The UIC Group supports EPA efforts to define a de minimis volume exemption. EPA should grant the exemption, but modify it to reduce the analytical burden. The proposed exemption requires facilities to identify and quantify the level of underlying hazardous constituents (UHCs) in characteristic wastes streams. Each characteristically hazardous waste stream would need to be sampled to identify if the underlying hazardous constituents are present at levels less than ten times the treatment standards found at §268.48. For each sample collected the analytical costs would be approximately \$1,500. As an example, one member's facility has completed a sampling round to evaluate the impact of the Phase III and Phase IV proposals for characteristically hazardous wastes at their site. This single round of sampling, analytical, and evaluation of data collected cost \$46,000. Additional costs were incurred to install sampling connection points into hard-piped systems. EPA could achieve the goal of only allowing relatively dilute streams to be considered for the de minimis volume exemption by simply requiring the waste stream at the point of generation to contain at least 90 percent water by weight instead of specifying a hazardous constituent concentration. Determining the percent water weight is much less costly. This requirement in conjunction with limiting the combined volume to less than one percent of the total flow at the wellhead on an annualized basis achieves the goal of ensuring that the de minimis volume provision applies only to relatively dilute wastes that are relatively small in the aggregate. This change in analytical criteria also assures that the applicability of the provision can be determined easily for both compliance and enforcement purposes. The de minimis provision as proposed in Phase IV would apply only to nonhazardous injection wells. This is contrary to what we believe is EPA's intent which is to provide relief for minor waste streams at both hazardous and nonhazardous Class I injection well facilities. This is an unnecessary restriction in applicability because Class I wells that inject hazardous waste must obtain no migration exemptions which include a demonstration that the technology is environmentally protective whereas surface impoundments and Class I wells injecting nonhazardous waste are not subject to this onerous demonstration requirement.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean

Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P034
COMMENTS CMA UIC Task Force
RESPONDER HM
SUBJECT EQUV
SUBJNUM 034
COMMENT

Listed Wastes Should not be Subject to Treatment Standards Applicable to
Characteristic Wastes.

EPA intends to retain the current rule stated in 40 C.F.R. §268.9(b): that the treatment standards for characteristic wastes do not apply if the treatment standard for the listed waste addresses the hazardous constituent at issue. The Phase III proposal included a modification to 40 C.F.R. §268.9(b) which would have subjected all listed wastes that are characteristically hazardous to treatment standards applicable to characteristic waste. The Phase IV proposal correctly utilizes limited resources, assuring that listed wastes are not subject to the double jeopardy of being evaluated for compliance with both the UTS treatment requirements for the listed waste's constituents and the underlying hazardous constituents. Further, this minimizes the need to break into hard-piped systems in order to sample characteristically hazardous wastes simply to identify underlying hazardous constituents for those pipe systems that transport listed wastes.

Residues from Pretreatment of Injected Wastes are Newly-Identified Wastes and are
Therefore Only Subject to Treatment Requirements for Characteristic Wastes if
They Themselves Exhibit Hazardous Characteristics.

In the Third Third rule, EPA established the principle that the generation of a new treatability group is considered a new point of generation and thus a new point for determining whether a waste is prohibited. In the Phase IV proposal EPA uses this principle to evaluate wastewater treatment sludges generated in Subtitle D surface impoundments. Under this principle wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, even though the sludges may be derived from characteristically hazardous waste streams. Instead the newly-generated waste is evaluated to determine if it is subject to the LDR standards. The Phase IV proposal does not, however, directly address the LDR status of residual solids from Class I injection well systems. The UIC Group has been advised in discussions with the EPA that residual solids from Class I injection well systems will also be considered to be newly-generated wastes under the "change in treatability group principle." Under this interpretation, such solids will be subject to treatment requirements for characteristic wastes only if they themselves exhibit the hazardous characteristic. This verbal understanding is consistent with the approach taken by EPA in the preamble of the Phase IV proposed rules. The UIC Group urges EPA to clarify that the residues from Class I pretreatment systems are newly-generated wastes and are not subject to LDR requirements unless they are themselves hazardous wastes.

Nonwastewater Residuals from Treatment of Mixtures of Aggregated Waste Streams, Irrespective of the Individual Stream's Treatability Group, Should be Considered as Newly-Generated Waste.

CMA member companies continue to be concerned about sludges that are generated from waste streams that are considered nonwastewaters. Due to either the total organic carbon or total suspended solids content many wastewater streams are classified as nonwastewaters for LDR purposes. Because a residual solid is a nonwastewater for LDR purposes, it could be argued that no change in treatability group occurs and that the residual solids which include sludges, filters, filter cakes, etc. are subject to the same treatment standards as the liquid streams. The UIC Group believes that these streams are also newly-generated and should be evaluated based upon the concentration of constituents in the waste rather than relying on the characteristics of the individual streams that were aggregated and then treated to form the sludges.

The aggregation of streams prior to injection allows for both chemical and physical changes to occur in the combined waste stream. Catalyst fines may be present which will allow for further reaction of the unreacted raw materials and polymerization of monomers. Additionally, salts may form as a result of mixing streams of various pH and chemical matrices. The settled sludge will contain a different matrix than does the wastewater influent.

Residues are also different from the wastewater streams because they are collected on various media which become part of the residue waste matrix. These media can include materials such as diatomaceous earth and wound fiber cartridges. The constituents adhering to the filter media will be more similar in nature to the sludge residue than to the wastewater influent. These residues are unlikely to be pumpable materials; whereas, the wastewater influent is pumpable. The organic constituents in the residues are more likely to be longer-chained organics and are less likely to be volatile. The residues are also more likely to contain higher concentrations of metals and salts than is the wastewater.

Because the residues generated in Class I pretreatment systems are fundamentally different than the wastewaters (which may be considered as nonwastewaters for LDR purposes), EPA should clarify that these waste streams are newly-generated and are only subject to LDR provisions applicable to characteristic wastes if the residues themselves are characteristically hazardous. EPA should not create another mechanism that requires waste codes to be applicable to wastes derived from hazardous wastes, thereby bringing in large volumes of nonhazardous waste into the perverse universe of regulation as hazardous wastes.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P034
COMMENTS CMA UIC Task Force
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 034
COMMENT

Clarify that LDRs do not apply to decharacterized wastes injected at facilities with approved no migration exemptions.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P034
COMMENTS CMA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 034
COMMENT

EPA Should Appropriately Limit the Circumstances Under Which Treatment to Address Underlying Hazardous Constituents in Characteristic Wastes is Required.

The UIC Group has already stated its concern that requiring segregation and treatment of characteristic streams to meet UTS levels is not only unnecessary but actually may increase the risk to human health and the environment.

The UIC Group recommended in the Phase III comments that EPA identify threat levels based upon health-based levels modified by an appropriate dilution/attenuation factor reflecting a reasonable mismanagement scenario. EPA recognizes in the Phase IV proposal that constituents at UTS levels may not present risks that warrant regulatory concern. Specifically EPA states that "MCLs are a reasonable benchmark of risk posed to human health from a drinking water source," and proposes not to require controls on surface impoundment leakage unless levels of hazardous constituents exceed MCLs by a factor of 10 (a reasonable dilution/attenuation, factor according to EPA). The UIC Group supports EPA's intent to require treatment only if it is necessary to minimize an actual threat to human health or the environment. In the context of injected wastes, if the commingled wastes already are at a hazardous constituent level which will minimize threats, treatment to further reduce the mass of constituents will neither reduce the volume of waste injected nor produce any meaningful reduction in toxicity. Therefore treatment to remove underlying hazardous constituents prior to injection is unnecessary to protect human health and the environment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the

Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTER Utility Solid Waste Activities Group

RESPONDER HM

SUBJECT EQUV

COMMENT 3. The CWM Opinion Does Not Require EPA To Impose Regulatory Standards on Sludges USWAG is especially troubled by the Option 2 proposal for subjecting sludge to the LDRs. The CWM opinion does not suggest, let alone require, that EPA alter its "treatability group principle" and impose regulatory standards on the sludges generated during treatment of wastes in CWA systems. The "treatability group principle" provides that a waste that has changed its form during treatment, e.g., from a wastewater to a nonwastewater, is sufficiently different in character and characteristics from the original waste that its potential threat to the environment should be assessed anew, and that such newly generated forms of the waste should only be subject to hazardous waste regulation if they themselves exhibit a characteristic. See 55 Fed. Reg. 22520, 22661-62 (June 1, 1990). This principle was not challenged in the CWM litigation and thus was not addressed in that decision. There is no reason for EPA to assume that the Court reached out to decide an issue that was not before it and to infer a requirement to impose LDR regulations on sludges generated in CWA systems managing decharacterized wastes. EPA itself recognizes this point and also questions its legal basis for abandoning this concept in the Phase IV rule. 60 Fed. Reg. at 43673. More fundamentally, the change in treatability group principle reflects the reality of many treatment systems as well as the fact that the chemistry, and thus the threat posed to the environment, of constituents bound up in a solid are substantially different from those same constituents present in a wastewater and therefore must be analyzed separately. EPA has presented no information in the current proposal to undermine that logical conclusion. Moreover, if EPA were to abandon its change in treatability group policy and thereby, in effect, impose a "derived from rule" on characteristic wastes, it would

create many of the same problems that have resulted from the derived from rule for listed wastes. The Agency is well aware that the derived from rule has resulted in many low hazard wastes being subject to Subtitle C regulation, and EPA is now going through great pains to correct this major flaw in the Subtitle C system (via the "Hazardous Waste Identification Rule" process). It would be nonsensical for the Agency to unnecessarily import one of the least defensible components of the Subtitle C program into the LDR program as it relates to characteristic wastes. The current system as applied to characteristic wastes is rational and workable, and the Court's decision creates no mandate to abandon and replace it with a more burdensome regulatory program. Therefore, USWAG urges the Agency to retain the change in treatability group principle and not to automatically apply LDR standards to sludges generated during the treatment of decharacterized wastes in CWA surface impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTS Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT IX. EPA SHOULD CLARIFY THAT DILUTION IS PERMISSIBLE TO REMOVE A CHARACTERISTIC PRIOR TO FURTHER TREATMENT. USWAG believes that the focus of the Phase IV proposal on surface impoundment standards and its discussion of potential management options necessitates clarification of EPA's position on dilution. In particular, USWAG urges EPA to clarify in the final rule that it is lawful to use dilution to render a characteristic waste that is subject to an LDR treatment standard nonhazardous, provided that additional treatment other than dilution is used to treat the "underlying hazardous constituents" in the decharacterized waste prior to land disposal. Neither RCRA nor the CWM decision prohibits the dilution of a characteristic hazardous waste for purposes of removing the hazardous characteristic so that any additional treatment for the underlying hazardous constituents in the decharacterized waste can take place in facilities that are not subject to the RCRA hazardous waste permitting requirements. In fact, USWAG notes that in the Phase III proposal, EPA clearly contemplated wastes being decharacterized through aggregation prior to their management in CWA surface impoundments for treatment in order to meet LDR standards. 60 Fed. Reg. at 11702, 11710-12. Despite EPA's recognition of this principle, USWAG has found that there is substantial confusion among state regulators and others regarding whether any dilution of prohibited wastes is allowed. Therefore, USWAG urges EPA to clarify in the preamble to the final rule, or in some other appropriate manner, that characteristic wastes can be diluted to remove their hazardous characteristics and that such decharacterized wastes can be treated in non-Subtitle C facilities to meet applicable LDR treatment standards.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P035

COMMENTS Utility Solid Waste Activities Grp

RESPONDER SM

SUBJECT EQUV

COMMENT VI. EPA SHOULD REJECT THE ENVIRONMENTAL TECHNOLOGY COUNCIL'S PROPOSAL TO BAN NON-AMENABLE WASTES FROM LAND-BASED BIOLOGICAL TREATMENT SYSTEMS.

EPA proposes to reject a request that was made by the Environmental Technology Council ("ETC") to prohibit the management of wastes in land based biological treatment systems if the wastes are not amenable to biological treatment. 60 Fed. Reg. at 43677. USWAG fully agrees with EPA that such a prohibition is unnecessary, and that the concerns that the proposal purports to address are most appropriately addressed by the end-of-pipe controls discussed in this rule and in the Phase III proposal. The imposition of additional controls beyond the end-of-pipe requirements not only would be superfluous, but it also would create significant disruptions in existing treatment operations. As noted by EPA, "the provisions in Phase III and Phase IV are designed to protect human health and the environment from hazardous constituents in surface impoundments, therefore, there is no need to regulate nonamenable wastes." Id. USWAG supports this conclusion. USWAG further agrees with EPA that such a ban would impose significant technical impediments on the regulated community in determining amenability to biological treatment. In particular, EPA acknowledges that the ability of the regulated community to assess the amenability to treatment of a particular wastestream or a constituent is "extremely difficult" and is accompanied by much "uncertainty." Moreover, there has been no indication that excessive migration of "nonamenable" wastes is occurring, or that such wastes in any way impede the functioning of the biological treatment systems. The advantages of such a prohibition are minimal, and EPA correctly has proposed its rejection.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTER Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT C. USWAG Requests that EPA Clarify that the LDR Requirements are Only Applicable to Constituents Contained in a Hazardous Waste at the Point of Generation. USWAG believes it is imperative that EPA reiterate in the final Phase IV rule that the only constituents of concern that must be addressed under the LDR program (and therefore must be treated prior to discharge) are constituents that are present in wastes that are hazardous at the point of generation. Because the CWA impoundments that receive decharacterized wastes also receive numerous other aqueous wastestreams that are not subject to the RCRA LDR program, it is important that EPA clarify that constituents contained in wastes that are non-hazardous at the point of generation and that are discharged to the impoundment are not subject to LDR requirements and do not have to be monitored at the point of discharge for compliance with the LDRs. Moreover, EPA should provide a mechanism in the final rule whereby parties can submit data to demonstrate that certain constituents did not come from the waste that is subject to the LDRs.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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regulation.

DCN PH4P035

COMMENTER Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT II. USWAG SUPPORTS END-OF-PIPE COMPLIANCE FOR TC-METAL WASTES.

A. End-of-the-Pipe Compliance Fully Satisfies the Requirements of the CWM Opinion. USWAG emphasized in its comments on the Phase III LDR proposal that it fully supported the requirement that compliance with the LDRs for decharacterized waste in CWA systems be determined at the same point that NPDES and pretreatment limits must be met. See USWAG Comments on Land Disposal Restrictions - Phase III, May 1, 1995 (Docket No. F-95-PH3P-FFFF). USWAG reiterates its support for this standard and the Agency's proposed application of it to the treatment standard for TC-metal wastes. The "end-of-the-pipe" treatment standard is fully consistent with the Court of Appeals decision in CWM. As acknowledged by EPA in the current proposal, "Option 1 relies on the Phase III rule to satisfy the equivalence standard enunciated by the D.C. Circuit. . . . the court's opinion does not explicitly require more." 60 Fed. Reg. at 43659. The Court in CWM determined that it was permissible, as a proper accommodation between the CWA and RCRA, to allow wastes that had not been treated to meet LDR standards to be placed in CWA surface impoundments as long as the waste receives the same degree of treatment for the underlying hazardous constituents as would be achieved in any other RCRA treatment facility. 976 F.2d at 20. Under this standard, wastes that have been decharacterized can be placed in CWA impoundments for treatment, provided that the LDR Universal Treatment Standards ("UTS") are met at the point of discharge from the impoundment. This strategy is entirely consistent with the CWM opinion because the decharacterized wastewaters are receiving the same degree of treatment at the point of discharge that would otherwise be obtained in a RCRA permitted treatment facility. As EPA has already previously concluded, "there are adequate constraints in the CWA implementing rules to prevent these end-of- pipe standards from being achieved by means of dilution." 60 Fed. Reg. at 11711. Therefore, an end-of-the-pipe equivalence standard will ensure that the requisite degree of treatment of underlying hazardous constituents is achieved at the point of discharge without inappropriate dilution. The CWA impoundments at issue in the Phase IV proposal have been used for years to

manage aqueous decharacterized wastes in an environmentally sound and economically efficient manner. Indeed, the Agency has recognized that these systems pose little environmental risk that is not already being addressed under existing regulatory controls. *Id.* at 11704 ("the risks addressed by this rule, particularly UIC wells, are very small relative to the risks presented by other environmental conditions or situations"). Thus, there is nothing to indicate that these systems are not capable of adequately treating these wastes or that they are posing any threat to human health or the environment warranting the type of intrusive and cost prohibitive controls contemplated in Options 2 or 3.

B. EPA Should Defer to the CWA Where the Constituent of Concern in the TC-Metal Waste is Addressed by an NPDES Permit or Pretreatment Requirement. USWAG also believes that the Agency should recognize that compliance with a CWA standard that addresses hazardous constituents of concern in TC-metal wastes constitutes compliance with the RCRA LDRs. EPA acknowledged this principle in its Phase III proposal with regard to TC-organic wastes (*Id.* at 11711-12), and the same rationale applies with equal force here. Where the RCRA constituent of concern is fully regulated under the Clean Water Act, there is simply no reason to impose an additional RCRA standard on these same constituents at the point of discharge. Doing so would merely be redundant regulation for its own sake, and would be directly contrary to Congress' mandate in section 1006(b) of RCRA (42 U.S.C. § 6905(b)) that EPA integrate provisions of RCRA and the CWA when implementing RCRA and avoid duplication, to the maximum extent possible, with CWA requirements. Therefore, deference to Clean Water Act regulation is fully consistent with RCRA, and provides ample protection for human health and the environment while minimizing disruption of existing treatment systems. In addition, the treatment technologies and standards developed under the CWA are more likely to be better tailored to the wastestream because the CWA is specifically geared to regulating aqueous discharges and CWA permit writers have greater experience in reviewing and permitting systems for the management of industrial aqueous wastes. While USWAG endorses the Agency's approach of deferring to applicable CWA controls where appropriate, USWAG believes the Agency also should defer to the judgments made under the CWA that certain constituents do not require regulation at the point of discharge. For example, if an NPDES permit writer has determined that there is no need to impose specific limitations

in a facility's permit for certain constituents because that constituent will not be present in the discharge at a level that poses a threat to human health and the environment, RCRA should defer to that judgment and not require monitoring and compliance with the LDR standards for these constituents. The permit writer's judgment represents the application of the best technology or the necessity to achieve water quality standards. Where a permit writer has specifically determined that a particular constituent (or constituents) does not need to be addressed, that determination represents a finding that either the technology has adequately treated that constituent or the constituent does not pose a threat to environment. In these circumstances, imposing RCRA treatment standards on the constituent simply would be redundant regulation for its own sake.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTER Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT III. PROPOSED MANAGEMENT OPTIONS FOR DECHARACTERIZED WASTES.

USWAG is pleased to respond to the Agency's request for comment on the Agency's evaluation of options for regulating potential releases of hazardous constituents from CWA surface impoundments. 60 Fed. Reg. at 43659. EPA has proposed three options for imposing controls on air emissions, leaks, and sludges associated with surface impoundments managing decharacterized wastes. The first option would not impose any controls beyond the end-of-pipe limits discussed above. Option 2 would impose separate controls on air emissions, leaks and sludges from surface impoundments, and Option 3 actually would prohibit decharacterized wastewaters from being placed in a surface impoundment until they had been treated to meet applicable treatment standards. *Id.* As discussed in detail below, the CWM decision does not mandate the imposition of any additional controls on surface impoundments beyond the end-of-the-pipe controls described in the Agency's Phase III proposal, and therefore, the only appropriate management strategy is that proposed in Option 1. A. USWAG Supports EPA's Adoption of Proposed Option 1 USWAG fully supports EPA's proposed Option 1 and its emphasis on end-of-the-pipe treatment requirements as being most consistent with the mandate of the CWM decision. There is nothing in the opinion of the Court of Appeals in the CWM decision that requires any of the additional controls on sludges, surface impoundment integrity, or air emissions that EPA is contemplating in the proposal. In requiring that the treatment of characteristic hazardous wastes in a CWA system be "equivalent" to that provided by a RCRA system, the CWM Court was simply making clear that such wastes, when managed in a CWA system, must be treated and cannot be allowed to meet LDR requirements simply through aggregation with other waste streams. The Court was not addressing the management standards applicable to the treatment facility managing a decharacterized waste. As a result, the Court's mandate that the influent wastes receive the equivalent level of treatment that they would receive in a RCRA system does not mean that the CWA facility itself must be subject to the same standards that would apply to a RCRA facility. In interpreting the scope

of the Court's ruling, it is imperative that the Agency keep in mind the issue the CWM Court was actually deciding. EPA's Third Third LDR rule provided that characteristic wastes managed in CWA systems could be diluted as long as the treatment standards were met at the point of discharge. See 976 F.2d at 19. It was this amendment to the dilution prohibition that was challenged by the petitioner. And it was this narrow issue that the Court was addressing when it spoke about the level of treatment required. *Id.* An examination of the Court's opinion reveals that the Court's focus was solely on the waste stream being managed in the CWA system and not on any aspects of the system itself. Thus, the Court stated that treatment of wastes in a CWA system must meet RCRA requirements "prior to discharge" to surface water or a POTW. *Id.* at 20. Even more explicitly, the Court stated that "what leaves a CWA treatment facility can be no more toxic than if the waste streams were individually treated pursuant to the RCRA treatment standards." *Id.* These statements make clear that the Court was narrowly focused on the specific issue of ensuring that hazardous wastes managed in CWA systems receive adequate treatment prior to discharge and are not merely diluted by aggregation with other waste streams. Given this narrow scope of the Court's holding, the Court's opinion does not require EPA to impose management standards for leaks or air emissions on surface impoundments managing decharacterized hazardous wastes.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTS Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT B. The Proposed Controls in Option 2 are Not Mandated by the

CWM Opinion. 1. The CWM Opinion Does not Require the Imposition of Additional Controls to Regulate Leaks From Surface Impoundments. There is nothing in the CWM opinion that compels EPA to address the issue of leaks from CWA surface impoundments used to manage decharacterized hazardous waste. As discussed above, the CWM opinion addressed only the issue of whether dilution in CWA systems was by itself an acceptable form of treatment for hazardous waste and held that it was not.

Notwithstanding this conclusion, however, the CWM Court also held that decharacterized wastes could continue to be managed in CWA systems as part of the required accommodation between the CWA and RCRA. 976 F.2d at 20. The Court recognized that decharacterized hazardous wastes that had not yet met LDR treatment standards could be placed into units that are not Subtitle C units and for which Subtitle C management standards are not required. Therefore, the decision simply cannot be deemed to require the imposition of Subtitle C- like groundwater monitoring requirements on CWA systems. Such a result would effectively turn these Subtitle D units into RCRA Subtitle C-like units, despite the fact that the CWM Court explicitly allowed the continued management of these wastes in such units as part of the statutorily required accommodation between the CWA and RCRA. In addition, imposition of Subtitle C regulatory requirements in this context makes little regulatory sense. In many CWA systems, the decharacterized wastes managed in the system are a relatively small percentage of the total volume wastes being treated in the system. Therefore, it is unlikely that the decharacterized waste component of the waste stream will significantly alter the overall characteristics of the waste being managed in the unit or will significantly alter the nature of any potential leakage from the unit. Moreover, the CWA systems at issue in this rulemaking are subject to regulation under both the Clean Water Act and Subtitle D of RCRA. If there are any environmental problems with such units the Agency has ample authority under those statutory regimes to address such issues. However, while USWAG strongly disagrees that groundwater monitoring standards are appropriate to impose on CWA surface impoundments that manage decharacterized waste,

USWAG agrees with EPA, that if such requirements are imposed, the Agency should defer to existing state groundwater monitoring programs to the extent that such requirements are available. Id. at 43669. USWAG notes that, based on available information, there are 25 states that manage 83% of the wastewaters that are placed in surface impoundments. Of those 25 states, all of them require monitoring to protect surface waters, 19 have liner requirements, and 19 require groundwater monitoring. This data demonstrate that there is widespread regulation for releases from surface impoundments at the state level, and that deference to this existing framework is necessary to avoid the imposition of redundant and potentially contradictory federal and state requirements on the regulated community. 2. Nothing in the CWM Opinion Mandates the Imposition of Air Emission Controls on CWA Surface Impoundments. As discussed above, the CWM opinion does not require EPA to impose additional controls on CWA surface impoundments. This conclusion is particularly true in the case of air emissions. The CWM opinion does not address air emissions from wastes that are being managed in surface impoundments, and there is nothing to indicate that the Court was concerned with this issue. Moreover, the statutory provision that the Court was interpreting, i.e., the land disposal restrictions, addresses only the risks arising from the permanent disposal of untreated wastes onto the land. Nothing in the LDRs addresses the risks that may arise from volatilization of hazardous constituents during treatment. Therefore, the Court's opinion cannot be construed to require the Agency to impose air emission standards on surface impoundments that are treating decharacterized wastes. Indeed, such a construction of the statute or the CWM decision is beyond any reasonable or defensible interpretation. Accordingly, the regulation of any potential air emissions should appropriately remain within the purview of the Clean Air Act ("CAA"). As the Agency is well aware, imposing such air emission standards would impose astronomical costs on operators of surface impoundments who could be required either to install emission control equipment or to construct alternative tank-based systems to manage these wastes. The CWM opinion does not dictate such an onerous result, and EPA has not developed a record to demonstrate that the risk posed by such emissions from the decharacterized waste would justify the inordinate expenditures that would be required. Further, if air emissions from CWA systems do pose a risk, EPA may readily evaluate that risk and

impose whatever controls are necessary under the toxic air pollutants program contained in section 112 of the CAA. 42 U.S.C. § 7412. That section requires EPA to identify major sources of hazardous air pollutants ("HAPs") and to develop specific technology-based control standards for those sources. For example, final NESHAPs addressing surface impoundment emissions have been promulgated for benzene wastes (40 C.F.R. Part 61, Subpart FF) and for hazardous organics (40 C.F.R. Part 63, Subparts F-I), and NESHAPs have been proposed for synthetic organic chemical manufacturing (40 C.F.R. Part 60, Subpart YYY) and off-site waste operations (40 C.F.R. Part 60, Subpart DD). Moreover, surface impoundments, like all waste management operations, are subject to all other CAA requirements. See *Ogden Projects, Inc. v. New Morgan Landfill Co., Inc.*, No. CIV.A.94-CV-3048, 1995 WL 564215 (E.D. Pa. September 22, 1995) (landfill subject to new source review permit requirements). Therefore, the CAA provides the appropriate mechanism for EPA to determine whether CWA surface impoundments are, in fact, major sources of HAPs and if so to develop specific controls to address potential emissions. This program represents Congress' determination of which air pollution sources require regulation, and EPA should not on its own volition impose additional standards on facilities merely because they are managing formerly characteristic hazardous wastes. In addition, there is no justification for extending the existing RCRA air emission standards to these surface impoundments because EPA has made no determination that these impoundments pose the sort of risk that would justify the cost of such controls.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P035

COMMENTS Utility Solid Waste Activities Grp

RESPONDER SS

SUBJECT EQUV

COMMENT C. Proposed Option 3 Is Both Unnecessary And Overly Burdensome.

Proposed Option 3 is entirely unjustified and is in no way contemplated by the CWA decision. Such a regulation would be enormously disruptive of existing waste management systems. As the Agency is well aware, CWA systems handle large volumes of waste, on the order of hundreds of thousands to millions of gallons, and the retrofitting of such systems, or the construction of alternative facilities, would require an enormous capital outlay. It would be rational for the Agency to impose such controls only if surface impoundments created a threat to the environment sufficiently severe to justify the enormous cost associated with retrofitting or replacing them. However, there is simply no justification to impose those requirements on all surface impoundments managing decharacterized wastes. The Agency has developed no record to demonstrate that these units pose the sort of environmental risk that justifies the imposition of this sort of expenditure, and USWAG does not believe that such a risk actually exists. Therefore, because neither the CWM decision nor the rulemaking record support such action, USWAG urges the Agency not to adopt Option 3. USWAG is encouraged by the Agency's recognition that Option 3 would destroy the "accommodation between the CWA and RCRA" upheld by the Court in CWM, and that, as a result, EPA may not even have the authority to institute such a requirement. 60 Fed. Reg. at 43677. Moreover, as EPA has acknowledged, "impoundment- based wastewater treatment systems can be effective means of treating decharacterized wastewaters, and can do so without undermining core values of RCRA and the LDR program." Id. Based upon the "potential disruption to needed wastewater treatment, high costs to affected industries, and lack of targeted risk reduction" EPA is not recommending the adoption of Option 3. Id. at 43659. USWAG is in full agreement with this assessment, and reiterates that the negative ramifications, heavy costs and negligible benefits associated with this option warrant its rejection.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean

Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P036
COMMENTS COMMENTER American Iron & Steel Ins
RESPONDER SS
SUBJECT EQUV
SUBJNUM 036
COMMENT

The most fundamental jurisdictional principle underlying Subtitle C of RCRA is that EPA's authority under that portion of the statute is limited to the regulation of "hazardous wastes." See, e.g., *American Mining Congress v. EPA*, 824 F.2d 1177, 1179 (D.C. Cir. 1987) ("EPA's authority [under Subtitle C] extends only to the regulation of hazardous waste."). Of course, one important exception to this principle has been recognized by the courts. See *American Iron and Steel Institute v. EPA*, 886 F.2d 390 (D.C. Cir. 1989) (noting that the corrective action provision of RCRA "sweeps far more broadly than the rest of Subtitle C, with its focus on hazardous waste."), cert. denied, 110 S. Ct. 3237 (1990). However, given the central role that the principle plays in the Subtitle C regulatory scheme, it should not be overridden without explicit authority.

In the present case, there is nothing in the statute that mentions, much less authorizes EPA to regulate leaks, volatilization, or sludges from non-hazardous waste surface impoundments managing formerly characteristic wastes. Moreover, as EPA acknowledges in the preamble to the Phase IV proposal, the decision of the U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") in *Chemical Waste Management, Inc. v. EPA*, 976 F.2d 2 (D.C. Cir. 1992) ("Chem Waste II") does not explicitly mention or authorize controls for such leaks, volatilization, or sludges. See 60 Fed. Reg. at 43,656. In the absence of any clear authority to regulate releases from non-hazardous waste impoundments, the general jurisdictional limits of Subtitle C must be respected. See *Louisiana Public Service Commission v. F.C.C.*, 476 U.S. 355, 374 (1986) (holding that "an agency literally has no power to act ... unless and until Congress confers power upon it."); *Walter v. Luther*, 830 F.2d 1208, 1211 (2nd Cir. 1987) (holding that statutes granting power to administrative agencies are strictly construed to confer only those powers that are expressly granted or necessarily implied). Accordingly, EPA should refrain from imposing RCRA Subtitle C controls on non-hazardous waste surface impoundments managing formerly characteristic wastes.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P036
COMMENTS American Iron & Steel Ins
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SUBJECT EQUV
SUBJNUM 036
COMMENT

Even if EPA had the authority to impose regulatory controls on leaks, volatilization, and sludges from non-hazardous waste impoundments managing formerly characteristic wastes, there can be no doubt that the Agency is not required to establish such controls. As noted above, neither the statute nor the Chem Waste II decision explicitly mentions leaks, volatilization, or sludges from CWA surface impoundments. Although the Court decision in some places suggests vaguely that wastes must be treated to minimize risks "before exiting ... CWA treatment facilities," 976 F.2d at 22, the Court clearly was focused on the ultimate end-of-pipe discharge of wastewaters from the treatment facilities. For example, in summarizing its holding, the Court stated that "treatment of solid wastes in a CWA surface impoundment must meet RCRA requirements prior to ultimate discharge into waters of the United States or publicly owned treatment works." 976 F.2d at 20. Similarly, the Court stated that "[t]he dilution of wastes in Clean Water Act facilities is acceptable so long as the toxicity of the waste discharged from the facility is minimized or eliminated consistent with RCRA." *Id.* at 7.

In short, the Court required only that the ultimate end-of-pipe discharge from a non-hazardous waste surface impoundment receiving formerly characteristic wastes meet the "minimize threat" standard of the RCRA LDR program. EPA itself has acknowledged that "the court's opinion does not explicitly require more." 60 Fed. Reg. 43,659. In light of the limited scope of the Court decision, the Agency should not make more work for itself by developing and implementing new regulations to address leaks, volatilization, and sludges. Doing so would be particularly inappropriate, in this age of limited resources, because the Agency itself has characterized such regulations as "a relatively low priority" that primarily would address "facilities [that] are believed to pose low risks." See Letter from Robert W. Hickmott, Associate Administrator, EPA, to Congressman Ron Wyden (November 3, 1995). Accordingly, EPA should not adopt any leak, volatilization, or sludge controls as part of the Phase IV rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P036
COMMENTS American Iron & Steel Ins
RESPONDER SS
SUBJECT EQUV
SUBJNUM 036
COMMENT

AISI supports EPA's proposal to exempt from the requirements of the Phase IV rule impoundments that receive only formerly characteristic wastes that have been treated to meet the UTS. The UTS limits were established for the express purpose of meeting the "minimize threats" standard of the LDR program. As a result, wastes that have been treated to the UTS do not require any additional LDR controls. Significantly, even under EPA's most stringent proposed option, Option 3, impoundments would be able to receive formerly characteristic wastes that have been treated to meet the UTS without complying with any requirements for leaks, volatilization, or sludges. Thus, EPA should exempt impoundments receiving these wastes from the requirements of the Phase IV rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P036
COMMENTS American Iron & Steel Institute
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 036
COMMENT

C. EPA Should Continue to Rely on Existing Regulatory Programs to Address the Risks in Question

If EPA decides (despite the arguments presented above) to address in the current rulemaking leaks, volatilization, and sludges from non-hazardous waste impoundments managing formerly characteristic wastes, AISI urges the Agency to continue relying on existing regulatory authorities, as specified in Option 1. AISI believes that existing authorities are fully capable of controlling all of the risks in question. As a result, additional controls under Subtitle C are not warranted. Each type of risk is discussed separately below. Leaks from non-hazardous waste surface impoundments managing formerly characteristic wastes already are being adequately addressed by a wide range of federal and state regulatory controls. These controls obviate the need for additional controls under the RCRA land disposal restrictions program. For example, as EPA itself notes in the preamble to the Phase IV proposal, virtually half of the facilities with impoundments that receive formerly characteristic wastes qualify as RCRA TSDs and therefore are subject to the Agency's corrective action authority. 60 Fed. Reg. at 43,659. This authority extends to all solid waste management units ("SWMUs") -- including non-hazardous waste impoundments -- at the facilities, and thus can be used to remedy leaks from the units that are presently of concern. AISI believes that the Agency's estimate of the percentage of facilities that are subject to corrective action may be significantly too low, because it may ignore facilities that have RCRA "permits-by-rule" that incorporate corrective action requirements. See 40 C.F.R. §§ 270.60(b)(3)(i) (permit-by-rule for facilities with hazardous waste injection wells); 270.60(c)(3)(vii) (permit-by-rule for Publicly Owned Treatment Works that accept hazardous wastes for treatment). This issue is of particular concern to AISI because many iron and steel facilities have RCRA permits-by-rule for hazardous waste injection wells located on-site. Accordingly, AISI urges the Agency to reconsider its estimate of the percentage of facilities with

non-hazardous impoundments receiving formerly characteristic wastes that are subject to corrective action.

Those facilities that are not subject to corrective action (and many that are) are frequently subject to stringent state groundwater protection rules that also control releases from non-hazardous waste surface impoundments. EPA has indicated that 36 of the 50 states (72%) have such groundwater protection rules. See 60 Fed. Reg. at 43,660. AISI believes that the proportion of impoundments subject to groundwater protection rules may be significantly higher, due to the uneven distribution of impoundments throughout the various states. In general, it seems reasonable to assume that states with greater amounts of industrial activity, and larger number of impoundments, are more likely to have stringent groundwater protection standards. Thus, greater than 72% of the impoundments of concern can be expected to be subject to state groundwater protection regulations. Although it is true that the state programs can vary significantly, all of them provide a significant level of protection against groundwater contamination resulting from surface impoundment leaks. Indeed, many state programs impose detailed design and operating standards for surface impoundments, require monitoring of groundwater, and mandate corrective action for releases. In those rare cases where a surface impoundment is not subject to direct leak controls, in the form of RCRA corrective action or state groundwater protection controls, it will at a minimum be subject to a wide variety of indirect leak controls. For example, because the impoundments of concern are, by definition, non-hazardous waste impoundments, neither the wastewaters entering the impoundments nor the sludges generated in the impoundments can be listed as hazardous wastes or exhibit a characteristic of hazardous waste. Similarly, the discharges from the impoundments must meet all of the applicable regulatory standards and permit conditions established pursuant to the Clean Water Act, as well as the requirements that will be established in the Phase III LDR final rule. Although none of these requirements directly address surface impoundment leaks, the composition of leaks from an impoundment clearly is closely related to the composition of the wastewaters entering the impoundment, the sludges in the impoundment, and the wastewaters ultimately discharged from the impoundment. As a result, the limitations on the wastewaters and sludges in an impoundment indirectly serve as a control on any leaks from the impoundment. Of course, it could be argued that at least some of these indirect

controls do not address the full range of hazardous constituents required to be addressed under the LDR program. However, the Phase III regulations are being designed specifically to address all of the underlying hazardous constituents in formerly characteristic wastes. Moreover, the other indirect leak controls cover a substantial percentage of the relevant constituents. For example, the RCRA Toxicity Characteristic ("TC") covers 8 of the 13 metallic constituents that can be considered underlying hazardous constituents in formerly characteristic wastes. Compare 40 C.F.R. §261.24, Table 1 with 40 C.F.R. § 268.48, Table UTS. In the case of some industries, the TC is likely to cover virtually all of the relevant constituents (e.g., metals and benzene, in the iron and steel industry). To the extent that the indirect leak controls (other than the Phase III controls) do not cover all underlying hazardous constituents, the constituents that they do cover can serve as indicators or surrogates for the full range of relevant constituents. In general, if a wastestream is treated to remove or destroy some organics, it will also be treated to remove or destroy other organics. Similarly, if a waste is treated to remove or stabilize some metals, other metals will also be removed or stabilized.

It could also be argued that the indirect leak controls will not limit leaks to a level that "minimizes" risks, as required under the LDR program. In fact, however, the Phase III controls likely will limit leaks to such a level, at least for some impoundments. Under the Phase III proposal, wastewaters discharged from a non-hazardous impoundment managing formerly characteristic wastes would have to meet either the UTS standards or corresponding CWA standards for all underlying hazardous constituents in the wastes. In many cases, leaks from the impoundment are likely to be similar in composition to the discharged wastewaters, because both materials come from the same source. Indeed, if the contents of the impoundment are continuously agitated (as in the case of a biological impoundment), the leaks should be indistinguishable from the discharged wastewaters. Accordingly, the leaks in many cases can be expected to meet the UTS or CWA standards. If direct discharges at these levels are deemed protective of human health and the environment, leaks at the same levels should also be deemed protective. After all, leaks from surface impoundments frequently empty into the same receiving waters as the discharges (because the impoundments are frequently located adjacent to the rivers into which they discharge, and groundwater flow beneath such impoundments is generally in the direction of the river). In fact,

leaks should be even less of a threat than discharges with comparable levels of hazardous constituents because leaks occur in much smaller volumes and are likely to be diluted and attenuated in the subsurface environment before they enter the receiving waters. Thus, even if the leaks have somewhat higher concentrations of hazardous constituents than the discharges, they should not pose a significant threat to human health and the environment.

In sum, because leaks from non-hazardous surface impoundments that manage formerly characteristic wastes are already extensively regulated both directly (through the RCRA corrective action program and state groundwater protection programs) and indirectly (through the RCRA definition of hazardous waste, CWA standards, and the upcoming Phase III LDR rule), there is no need for additional leak controls under the LDR program. For this reason, AISI urges EPA to adopt Option 1 with respect to these leaks and continue to rely on existing regulatory programs to address the risks associated with leaks from non-hazardous waste surface impoundments.

As discussed above, AISI believes that EPA can and should continue to rely on existing regulatory programs to address leaks, volatilization, and sludges from non-hazardous waste surface impoundments that manage formerly characteristic wastes. If EPA nevertheless concludes that additional controls are warranted under RCRA, the Agency must tailor those controls narrowly to ensure that they are effective and do not impose unnecessary, duplicative, or inconsistent burdens on the regulated community. In particular, if EPA promulgates new regulations to address leaks, volatilization, or sludges, it should exempt or exclude from those regulations, facilities that are already adequately addressed by existing regulatory authorities. In some cases, facilities should be exempt from all Phase IV controls. In other cases, they should be exempt from one or more of the media-specific controls. The discussion below focuses first on general applicability criteria for Phase IV controls and then on specific applicability criteria for the controls on leaks, volatilization, and sludges. Moreover, hazardous waste impoundments already are subject to a number of regulatory requirements that adequately address leaks, volatilization, and sludges. For example, prohibited wastes generally are required to meet LDR treatment standards before being placed in a hazardous waste surface impoundment, unless the impoundment meets the stringent requirements of RCRA § 3005(j)(11) and 40 C.F.R. § 268.4. These provisions address leaks by specifying that the impoundments must meet the minimum

technological requirements of RCRA § 3004(o), which mandate double liners, leachate collection systems, and groundwater monitoring. See 42 U.S.C. § 6925(j)(11)(A); 40 C.F.R. § 268.4(a)(3). They address volatilization by specifying that if evaporation is the principal means of treatment in a hazardous waste surface impoundment, prohibited wastes must be fully treated to meet LDR requirements before being placed into the surface impoundment. See 40 C.F.R. § 268.4(b). Of course, volatilization also will be controlled by operation of the new air emission standards of Subpart CC of 40 C.F.R. Parts 264 and 265. Finally, sludges are addressed by the requirement that the impoundments must be dredged at least annually, together with the definition of hazardous waste, which classifies many of the removed sludges as hazardous wastes. See 42 U.S.C. § 6925(j)(11)(B) (the removal requirement); 40 C.F.R. § 268.4(a)(2)(ii) (same); 40 C.F.R. § 261.3 (the definition of hazardous waste). Because leaks, volatilization, and sludges from hazardous waste impoundments already are adequately being addressed by existing RCRA regulations, these units should not be subject to any new controls promulgated in the Phase IV rulemaking. Because leaks, volatilization, and sludges from hazardous waste impoundments already are adequately being addressed by existing RCRA regulations, these units should not be subject to any new controls promulgated in the Phase IV rulemaking. EPA has proposed not to apply any leak, volatilization, or sludge controls to surface impoundments located at treatment, storage, or disposal facilities that are permitted under RCRA. See 60 Fed. Reg. at 43,661-62. AISI supports a regulatory exemption for these impoundments because releases from them either are being or can be readily addressed under existing RCRA regulatory authorities. Indeed, AISI believes that the exemption can and should be extended to impoundments located at TSDFs operating pursuant to interim status, or at other facilities subject to enforceable cleanup agreements with federal or state regulatory authorities. RCRA § 3004(u) mandates that hazardous waste permits require corrective action for all releases of hazardous wastes or hazardous constituents from SWMUs located at the facility. See 42 U.S.C. § 6924(u). As EPA acknowledged in the Phase IV proposal, the non-hazardous waste impoundments that are the focus of this rulemaking clearly would qualify as SWMUs. 60 Fed. Reg. at 43,659. In addition, the term "release" is defined broadly for purposes of the corrective action program to include "any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous ...

constituents[] into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents)." 55 Fed. Reg. at 30,874(proposed to be codified at 40 C.F.R. § 264.501). Accordingly, there is no need for additional controls under the LDR program for releases from non-hazardous waste surface impoundments at permitted TSDFs.

Moreover, RCRA § 3005(c) requires EPA to include in hazardous permits "such terms and conditions as [the Agency] determines necessary to protect human health and the environment." 42 U.S.C. § 6925(c). This so-called "omnibus" permitting authority is not limited to materials that qualify as RCRA hazardous wastes or units that manage hazardous wastes. Accordingly, it could be used to address releases from non-hazardous waste surface impoundments that are located at permitted facilities. In this way, EPA has not one, but two separate RCRA authorities for addressing releases of hazardous constituents from these impoundments into the environment. For this reason, impoundments at permitted TSDFs should be exempt from any Phase IV controls that are established for leaks, volatilization, or sludges.

Impoundments at interim status TSDFs also should be exempt from any Phase IV controls because they, too, are subject to corrective action under RCRA. Section 3008(h) of the statute authorizes EPA to issue interim status corrective action orders on a site-specific basis as necessary to protect human health and the environment. See 42 U.S.C. § 6928(h). This authority, like the authority under RCRA § 3004(u), can be used to address virtually all releases from non-hazardous waste surface impoundments at TSDFs. Thus, there is no need for additional controls under the LDR program for releases from non-hazardous waste surface impoundments located at either permitted or interim status TSDFs. The same is true for surface impoundments located at facilities that are subject to enforceable cleanup agreements (e.g., consent agreements or orders) with federal or state regulatory authorities. Accordingly, all three categories of impoundments should be exempt from any Phase IV controls.

AISI supports EPA's proposal to exempt from any Phase IV controls impoundments that meet the minimum technological requirements ("MTRs") of RCRA § 3004(o). In general, hazardous waste impoundments that meet the MTRs are effectively exempt from LDR REQUIREMENTS under RCRA § 3005(j)(11). See 42 U.S.C. § 6925(j)(11). Non-hazardous waste impoundments should not be subject to any more stringent requirements in this regard. For

this reason, non-hazardous waste impoundments should be exempt from Phase IV LDR controls if they meet the MTR requirements of RCRA § 3004(o). AISI, however, doubts whether many, if any, non-hazardous waste impoundments currently meet the MTRs or could feasibly be retrofitted to meet the MTRs. Accordingly, AISI does not believe that this exemption will provide meaningful relief from any Phase IV controls.

Finally, AISI urges EPA to allow facilities to take pollution prevention into account towards meeting their treatment obligations, even if they cannot fully meet those obligations through pollution prevention. Under the Agency proposal, a facility that reduces mass loadings to the requisite levels entirely through pollution prevention would be exempt from any treatment requirements within the surface impoundment, and from any controls on leaks, volatilization, and sludges from the impoundment. However, if a facility were only able to achieve 90% of the required reduction through pollution prevention, it would get no credit whatsoever for that reduction. Instead, it would be subject to the requirements of the Phase III and IV rules just as if it had not engaged in any pollution prevention efforts. This approach acts as an unnecessary disincentive to pollution prevention. In order to eliminate this disincentive, EPA should allow facilities to achieve the required reductions in mass loadings through treatment alone, through pollution prevention alone, or through any combination of the two that the facilities prefer.

As discussed above, AISI believes that EPA can and should continue to rely on existing regulatory programs to address leaks from non-hazardous waste surface impoundments that manage formerly characteristic wastes. See Section II.C.1. If EPA nevertheless concludes that additional leak controls are warranted under RCRA, the Agency should exclude from those new controls (1) impoundments engaged in biological or post-biological treatment, (2) impoundments subject to EPA's corrective action authority under RCRA, and (3) impoundments subject to comparable state groundwater protection programs. Each class of impoundments is discussed separately below.

As discussed above, AISI believes that EPA can and should continue to rely on existing regulatory programs to address volatilization from non-hazardous waste surface impoundments that manage formerly characteristic wastes. See Section II.C.2. If EPA nevertheless concludes that additional air emission controls are warranted under RCRA, the Agency should nonmechanically "extend" the existing

controls under Subpart CC of 40 C.F.R. Parts 264 and 265 tonon-hazardous waste impoundments, as proposed under Option 2 of the Phase IV proposal. Instead, the Agency should either develop new air emission controls tailored specifically tonon-hazardous waste impoundments managing formerly characteristic wastes, or modify the Subpart CC rules to reflect the differences between such units and the hazardous waste units that the rules were designed to address.

One reason not to extend the Subpart CC rules to non-hazardous waste impoundments is that those rules are currently in a state of disarray. The regulations were promulgated less than a year ago and have not yet become effective. See 59 Fed. Reg. 62,896 (December 6, 1994) (final rule); 60 Fed. Reg. 26,828 (May 19, 1995) (delaying the effective date until December 6, 1995); 60 Fed. Reg. 56,952 (November 13, 1995) (delaying the effective date yet again, until June 6, 1996). In addition, the rules are subject to eight separate legal challenges, which have been consolidated under the caption National Paint & Coatings Association, et al. v. EPA, No.95-1143 (D.C. Cir.). EPA itself has acknowledged that the regulations have resulted in substantial confusion and may be seriously flawed in several respects. For this reason, the Agency has indicated that it intends to issue clarifications and amendments to the Subpart CC regulations in the near future. 60 Fed. Reg. at 26,828 and 56,952. In the meantime, EPA has taken the highly unusual step of postponing twice the effective date of the final rule. *Id.* In light of this chaos, it would be reckless for EPA to "extend" the Subpart CC regulations to non-hazardous waste impoundments at the present time.

Moreover, the Subpart CC regulations should not be applied to non-hazardous waste impoundments because the rules were designed specifically to address air emissions from hazardous waste units. For example, EPA decided to require air emission controls under Subpart CC for hazardous wastes containing, at the point of generation, more than 100 parts per million by weight ("ppmw") volatile organics, based on an assessment of the risks posed by hazardous wastes exceeding that standard. See 60 Fed. Reg. at 62,903-905. In making this assessment, The Agency collected extensive information and made what it referred to as "critical assumptions" about the composition and characteristics of hazardous wastes, and the design and operation of the units in which they are managed. 59 Fed. Reg. at 33,515. There is no reason to believe that the information that was collected and the assumptions that

were made are appropriate for non-hazardous, formerly characteristic wastes. On the contrary, it seems likely that these wastes, because they are not classified as hazardous wastes, pose less of a threat than the hazardous wastes evaluated in the Subpart CC rulemaking. Because of the lower risks posed by non-hazardous, formerly characteristic wastes, such wastes should not be subject to the same 100ppmw threshold as hazardous wastes.

In light of the manifest problems with the Subpart CC rules, AISI believes that if EPA determines that additional air emission controls are warranted under the LDR program, The Agency should develop (through notice-and-comment rulemaking procedures) new rules that are tailored to non-hazardous, formerly characteristic wastes. One possible approach would be to prohibit impoundments receiving such wastes from employing volatilization as the primary means of treatment for the wastes. This approach is the one that has been used for nearly a decade for impoundments receiving hazardous wastes that do not meet applicable treatment standards. See 40 C.F.R. § 268.4(b). There is no apparent reason why more stringent regulations are necessary or appropriate for non-hazardous wastes.

If EPA nevertheless decides to "extend" the Subpart CC rules to non-hazardous waste impoundments managing formerly characteristic wastes, AISI is concerned that the result could be the needless imposition of substantial burdens on the iron and steel industry. Although most of the wastewaters generated directly from steelmaking operations generally contain less than 100ppmw volatile organics at the point of generation and therefore would not be affected by the extension of the Subpart CC rules, some of the wastewaters from cokemaking and related operations are likely to contain more than 100 ppmw volatile organics at the point of generation and therefore could very well be affected. These cokemaking wastewaters are almost invariably managed in tank-based biological treatment systems prior to placement into a surface impoundment. However, given the highly sensitive nature of the bacteria in biological treatment systems, the systems may not uniformly or consistently be capable of achieving the standards of efficiency set forth in the Subpart CC rules (e.g., a 95% reduction in the mass of organic compounds). See 40 C.F.R. §§ 264.1082(c)(2), 265.1083(c)(2). As a result, the surface impoundments in which the treated wastewaters are placed could be required to be retrofitted with covers that are vented through a closed-vent system to a control device, as specified in

the Subpart CC regulations. See 40 C.F.R. §§ 264.1085, 265.1086. Such retrofitting would be prohibitively expensive, particularly in light of the large size of many of the impoundments in question. Indeed, some of the relevant impoundments in the iron and steel industry are as large as 250 acres in size, raising questions as to whether retrofitting would even be technologically feasible. Retrofitting is especially problematic for those impoundments engaged in biological treatment, because the bacteria in such impoundments require large amounts of oxygen. Although the Subpart CC regulations appear to recognize this problem and in fact exempt certain biological treatment units from the retrofitting requirement, the exemption applies only to biological impoundments that achieve a specified level of efficiency.

See 40 C.F.R. §§ 264.1085(a)(2), 265.1086(a)(2). Just as AISI is concerned that the tank-based biological treatment systems in the iron and steel industry would not be able to achieve the required level of efficiency, so it is concerned that the biological impoundments that sometimes follow such tank-based systems would not be able to achieve the required level of efficiency, and therefore would have to be retrofitted in accordance with the Subpart CC regulations.

Certain portions of the Phase IV proposal hold out the possibility that at least some of the impoundments in the iron and steel industry might be eligible for one or more of the other available exemptions from retrofitting requirements. However, it is not at all clear whether any of these exemptions would in fact apply. For example, facilities apparently would be exempt from Option 2 air emission controls if they currently are, or will in the "near future" be "subject to CAA [Clean Air Act] standards for hazardous air pollutants." 60 Fed. Reg. at 43,660. Unfortunately, EPA has failed to explain in detail how it would decide whether a facility is "subject to" a CAA standard (e.g., whether a facility that is in an industry covered by a CAA standard, but below applicable regulatory thresholds, would be considered "subject to" the standard). The Agency also has failed to explain what it means by the "near future." In the absence of such information, it is difficult for AISI to provide meaningful comment. AISI believes that non-hazardous waste impoundments in the iron and steel industry are subject to sufficient controls under the CAA as to warrant their exemption from any Phase IV air emission controls. For example, the benzene waste NESHAP effectively controls emissions of HAPs from surface impoundments associated with coke by-product recovery

facilities, where the risks associated with such emissions warrant control. See Section II.C.2, above. Nevertheless, for purposes of these comments, AISI has little choice but to assume that at least some of the impoundments in the iron and steel industry would not be eligible for this exemption.

One other exemption that is mentioned in the Phase IV proposal is an exemption for wastes that are "treated by means other than dilution" to below 100 ppmw after the point of generation, but before entering a surface impoundment. See 60 Fed. Reg. at 43,664, Figure 2. Once again, however, EPA has failed to provide any additional information on this exemption. For example, the Agency has failed to explain how it would decide whether treatment was achieved by means other than dilution. EPA also has failed to explain the relationship, if any, between this exemption and the Subpart CC provision that wastes entering an impoundment must be treated using a process with a certain level of efficiency if the impoundment is to be exempt from air emission control requirements. See 40 C.F.R. §§ 264.1082(c)(2), 265.1083(c)(2). In the absence of such information, it is difficult for AISI to provide meaningful comment. As noted above, virtually all of the iron and steel industry wastes that contain greater than 100 ppmw volatile organics at the point of generation are managed in tank-based biological treatment systems prior to placement into an impoundment. AISI believes that such treatment should be viewed as treatment by means other than dilution. AISI also believes that many of the biologically treated wastes contain less than 100 ppmw volatile organics before they enter an impoundment, and thus the impoundment should be exempt from Phase IV air emission controls. Indeed, some of the treated wastes may contain barely detectable concentrations of volatile organics, making it irrational to require that they be managed in surface impoundments with air emission controls. Nevertheless, for purposes of these comments, AISI has little choice but to assume that at least some of the impoundments in the iron and steel industry would not be eligible for this exemption.

One additional exemption that is not explicitly mentioned in the proposed rule, but is hinted at broadly, is an exemption from air emission requirements for surface impoundments located at facilities that qualify as TSDFs. See, e.g., 60 Fed. Reg. 43,661-62. As noted above, such facilities, whether operating pursuant to a permit or interim status, are subject to corrective action for all releases from SWMUs at the facility. Non-hazardous waste surface impoundments managing formerly characteristic wastes

clearly qualify as SWMUs. Moreover, the definition of "release" is broad enough to encompass emissions of hazardous constituents into the atmospheres. As a result, EPA already has the authority under RCRA to address the air emissions of concern in this rulemaking, when they occur at permitted or interim status TSDFs.

Accordingly, such facilities should be exempt from any air emission requirements promulgated under the Phase IV rule.

In order to avoid the needless imposition of onerous air emission controls on non-hazardous waste surface impoundments that manage formerly characteristic wastes, AISI urges EPA not to adopt any such controls as part of the Phase IV rule. Alternatively, AISI urges The Agency to develop (through notice-and-comment rulemaking procedures) new air emission control requirements tailored to non-hazardous, formerly characteristic wastes, rather than simply subjecting such wastes to the existing Subpart CC requirements, which were designed for completely different wastes and are currently in a state of disarray. In the event that EPA nevertheless decides to "extend" the Subpart CC rules to non-hazardous waste impoundments that manage formerly characteristic wastes, the Agency should clarify that those rules do not apply to impoundments that receive wastes that have been subjected to biological treatment, even if such treatment does not achieve the level of efficiency set forth in the Subpart CC rule.

EPA also should exclude from any air emission requirements surface impoundments located at permitted or interim status TSDFs.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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Finally, AISI urges EPA to clarify that impoundments that receive formerly characteristic secondary materials that are not wastes are excluded from any requirements under the Phase III and Phase IV rules. EPA has long acknowledged that at least some characteristic secondary materials added to wastewater treatment systems serve as effective substitutes for commercial products and therefore are not solid or hazardous wastes. See, e.g., 50 Fed. Reg. 614, 637(January 4, 1985) (discussing the use of spent pickle liquor as a wastewater conditioner). Because these materials are not solid or hazardous wastes, the requirements of the LDR program-- including the requirements of the Phase III and Phase IV rules -- never attach. Although AISI believes that these conclusions are inescapable under the RCRA regulatory scheme, in order to eliminate any possible confusion, AISI requests that the Agency explicitly state that the final Phase III and Phase IV rules will not apply to impoundments receiving formerly characteristic secondary materials that are not wastes.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may

result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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AISI supports EPA's proposal to exempt from the requirements of the Phase IV rule surface impoundments that receive only de minimis quantities of formerly characteristic wastes. AISI is concerned, however, that the de minimis criteria under consideration by the Agency are inappropriate and unnecessarily stringent. Under the proposed rule, formerly characteristic wastes apparently would not be considered de minimis unless (1) they represent less than 1% of the total flow of wastewater into the surface impoundment, (2) they contain less than 10 times the UTS concentrations of hazardous constituents at the point of generation, and (3) they total no more than 10,000 gallons per day. See 60 Fed. Reg. at 11,714-15. AISI supports the 1% total flow criterion. However, it believes that this criterion alone is necessary and sufficient for identifying formerly characteristic wastes that are de minimis. A waste that contains less than 1% of the total flow into a surface impoundment is unlikely to significantly affect the level of constituents released into the environment from the impoundment. Requiring monitoring and treatment of such small-volume wastes, however, would be extremely burdensome. In light of the large costs and negligible benefits of imposing LDR requirements on formerly characteristic wastes that represent less than 1% of the total flow into a surface impoundment, such wastes should be exempt from any and all Phase IV controls. Indeed, this approach is the only one that would be consistent with other de minimis tests throughout the LDR program and the RCRA regulations, more generally. See, e.g., 40 C.F.R. §§ 261.3(a)(2)(iv)(E) (exemption from the "mixture rule" for wastewaters containing de minimis quantities of laboratory wastes); 268.1(e)(4) (exemption from the LDR program for wastewaters containing de minimis quantities of ignitable or corrosive commercial chemical products); 268.1(e)(5) (exemption from the LDR program for wastewaters containing de minimis quantities of ignitable or corrosive laboratory wastes). Adding a de minimis limitation on the total flow of formerly characteristic wastes into a surface impoundment is not necessary or appropriate. As noted above, formerly characteristic wastes that represent less than 1% of the total flow to a surface

impoundment are extremely difficult to monitor and treat, and doing so is unlikely to provide significant environmental benefits.

These conclusions hold true regardless of the absolute quantity of the wastewaters in question, and thus a total flow criterion should not be adopted in the final rule. The specific limit proposed by EPA -- 10,000 gallons per day -- is particularly inappropriate because it would unnecessarily and dramatically restrict the number facilities eligible for the de minimis exclusion.

AISI believes that most facilities where formerly characteristic wastes represent less than 1% of the total flow into a non-hazardous waste surface impoundment generate far greater than 10,000 gallons per day of these wastes.

Finally, AISI believes it would be unnecessary and inappropriate to add a limitation to the de minimis rule based on constituent concentrations. Once again, as noted above, formerly characteristic wastes that represent less than 1% of the total flow to a surface impoundment are extremely difficult to monitor and treat, and requiring such activities is unlikely to provide significant environmental benefits. These conclusions hold true regardless of the concentrations of hazardous constituents in the formerly characteristic wastes, and thus a concentration limitation should not be adopted in the final rule. In the event that EPA nevertheless concludes that a concentration limit is necessary and appropriate, it should increase the proposed limit substantially.

If a formerly characteristic waste that represents no more than 1% of the total flow into a surface impoundment contains no more than 10 times the

UTS level of a hazardous constituent, the highest possible concentration of a hazardous constituent in the impoundment is only 10% of the UTS ($0.01 \times 10 = 0.1 = 10\%$). Indeed, in most cases, the concentrations will be far lower. Such low levels are not necessary to protect human health and the environment. Indeed, wastes with hazardous constituents at these levels ordinarily are not prohibited from land disposal. Accordingly, if the Agency adopts a concentration threshold as part of the de minimis exemption, it should adopt a much higher concentration threshold (perhaps with a sliding scale that allows even higher concentrations in lower volume waste streams). In addition, EPA should specify that the concentration limit applies to the waste streams after any tank-based treatment, or before entering the surface impoundment, rather than at the point of generation.

RESPONSE:

The Agency is retaining the de minimis exemption previously promulgated at 40 CFR 268.1(e)(4).

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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2. Air Emissions from Non-Hazardous Waste Surface Impoundments Do Not Warrant Additional RCRA Controls

Air emissions from non-hazardous waste surface impoundments managing formerly characteristic wastes already are being adequately addressed by a range of other federal regulatory controls. These controls make additional controls under the RCRA land disposal restrictions program unnecessary.

For example, where emissions of hazardous air pollutants ("HAPs") such as volatile organic compounds from a surface impoundment may be significant, they are likely to be subject to national emission standards for hazardous air pollutants ("NESHAPs") established under the Clean Air Act. The NESHAP applicable to the synthetic organic chemical manufacturing industry ("SOCMI-HON"), which in many ways serves as a template for other NESHAPs regulations, specifically provides for the control of air emissions from surface impoundments, where emissions from those impoundments are significant. 40 C.F.R. § 63.134. In particular, surface impoundments receiving wastewaters containing total volatile organic HAPs at or above designated concentrations and flow rates must have specific air emission controls. 40 C.F.R. § 63.111. Those controls include a cover, closed-vent system, and a control device (e.g., an absorber, condenser, incinerator, or flare) to control vapors containing HAPs. 40 C.F.R. § 63.134.

With respect to the iron and steel industry, the NESHAP for benzene waste operations requires control of air emissions from surface impoundments receiving wastewaters from coke by-product recovery plants, among other facilities and operations. 40 C.F.R. § 61.340(a). Like the SOCMI-HON, this NESHAP requires that such surface impoundments must be equipped with a cover, closed-vent system, and vapor control device. 40 C.F.R. § 61.344. Wastewaters containing benzene below certain concentrations or flow levels may not trigger these requirements, but only where the risks do not warrant such controls. 40 C.F.R. § 61.342(c)(2). Although it is specifically benzene that triggers the surface impoundment controls, those controls, once installed, will control other volatile organic HAPs. Moreover, benzene is the primary HAP of concern for coke by-product recovery plants. Therefore, benzene acts as an "indicator pollutant" for determining when controls on surface impoundments are required. Accordingly, the benzene waste NESHAP effectively controls emissions of HAPs from surface impoundments associated with coke by-product recovery facilities, where the risks associated with such emissions warrant control.

In addition to existing requirements, the Clean Air Act Amendments of 1990 created a schedule for examining various processes and industries, requiring that specific regulations addressing air emissions from those processes be promulgated within four, seven, or ten years from enactment. For example, EPA plans to promulgate a NESHAP for steel pickling using an HCL process in November 1996, well before the statutory deadline of November 1997. 42 U.S.C.

§ 7412(e). This NESHAP will examine emissions of HCL, chlorine, and other HAPs in connection with steel pickling processes and HCL regeneration processes. 60 Fed. Reg. 23,999 (May 8, 1995). Like the SOCFI-HON, the steel pickling NESHAP will analyze the emissions from the entire process, including wastewater handling. If the emissions associated with wastewater handling in surface impoundments merit controls, then such controls will be required as part of the NESHAP, just as they are in the benzene waste NESHAP and the SOCFI-HON.

Other NESHAPs that were targeted for promulgation before November 1997 were the NESHAPs for Stainless and Non-Stainless Steel Manufacturing and Electric Arc Furnace ("EAF") Operation. EPA has proposed to delist these two categories based on an analysis of information about emissions from both categories. EPA's analysis revealed that neither category is a "major source" of emissions of any HAP. A major source is defined as a source with the potential to emit 10 tons per year ("tpy") of a single HAP or 25 tpy of all HAPs. EPA calculates this emission potential in an extremely conservative fashion, assuming that virtually all HAPs used by a facility are eventually emitted. Accordingly, a finding that a source is not a major source indicates relatively low use of HAPs by the source. A preliminary risk assessment was also performed in connection with this analysis. Therefore, EPA has examined the emissions from these facilities and the risks posed by those emissions -- apparently including the risks associated with emissions from surface impoundments -- and has determined that regulation of these sources is not warranted.

NESHAPs for three other source categories associated with the iron and steel industry are scheduled for promulgation before November 2000. They include iron foundries, steel foundries, and integrated iron and steel manufacturing. These facilities were viewed as lower priority sources posing less risk, and accordingly were designated to be addressed last. See 58 Fed. Reg. 63,941, 63,943 (Dec. 3, 1993). Once they are addressed, these facilities will be subject to comprehensive analysis, just like the facilities analyzed for purposes of the SOCFI-HON. Although these NESHAPs are still in the developmental stages, we have been informed that EPA does not currently believe that any controls on the wastewater treatment systems, including surface impoundments, in these industries will be necessary.

The federal Clean Air Act regulatory program not only imposes direct controls on hazardous air pollutants, but also imposes other controls that indirectly may reduce releases of underlying hazardous constituents from non-hazardous waste impoundments that receive formerly characteristic wastes. For example, EPA has established National Ambient Air Quality Standards ("NAAQS") for a variety of so-called "criteria pollutants" and has required all states to adopt

State Implementation Plans ("SIPs") for either achieving those standards (in areas that currently are in "non-attainment" of the standards) or preventing significant deterioration of air quality (in areas that have already attained the standards). The Agency has also developed a detailed permitting program for all significant air emission sources under Title V of the Clean Air Act. Although these programs may not explicitly address all of the constituents covered by the UTS, they will in general result in reduced emissions of those constituents. After all, air pollution control equipment installed to address one pollutant almost invariably reduces emissions of other pollutants. Once again, therefore, the federal Clean Air Act regulatory program clearly addresses the air emissions of concern in this rulemaking.

In these ways, air emissions from surface impoundments are already being addressed by current and upcoming regulations under the Clean Air Act. The Clean Air Act creates a rational scheme for addressing risks posed by emissions from surface impoundments in a systematic fashion. Various processes and industries have been categorized based on potential emission risk, and will be analyzed and regulated if necessary, including imposing controls on emissions from surface impoundments. The prioritization of facilities and allocation of resources created by the Clean Air Act should not be disrupted by new RCRA regulations. Therefore, additional emission controls on surface impoundments under the LDR program are unnecessary and could be disruptive.

Finally, it is worth noting that air emissions from non-hazardous waste surface impoundments located at facilities that qualify as hazardous waste TSDFs are also subject to regulation under the RCRA corrective action program. As noted above, facilities operating pursuant to a RCRA permit or interim status are subject to corrective action for all releases of hazardous constituents from SWMUs at the facility. See 42 U.S.C. §§ 6924(u), 6928(h). Non-hazardous waste surface impoundments clearly qualify as SWMUs. Moreover, the definition of "release" is broad enough to encompass emissions of hazardous constituents into the atmosphere. See 55 Fed. Reg. 30,798, 30,874 (July 27, 1990) (proposed to be codified at 40 C.F.R. § 264.501). As a result, EPA already has authority even under RCRA to address many of the air emissions of concern in this rulemaking.

Clearly, the Agency already has broad authority under both the Clean Air Act and the RCRA corrective action program to address air emissions from non-hazardous waste surface impoundments receiving formerly characteristic wastes. This authority also is being used extensively to address the emissions of concern in this rulemaking. For these reasons, AISI urges EPA to adopt Option 1 with respect to air emissions and continue to rely on existing regulatory programs to address the risks associated with emissions from non-hazardous waste surface impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that

underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P036
COMMENTS AMER. IRON AND STEEL INST.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 036
COMMENT

1. Certain Facilities Should Be Exempt from All Phase IV Controls

In the Phase IV LDR proposal, EPA indicated that the following categories of impoundments would be exempted from any new LDR requirements concerning leaks, volatilization, and sludges:

- (1) Hazardous waste impoundments;
- (2) Impoundments that do not receive formerly characteristic wastes that contain, at the point of generation, underlying hazardous constituents in concentrations above the UTS;
- (3) Impoundments located at permitted TSDFs;
- (4) Impoundments that meet the RCRA minimum technological requirements;
- (5) Impoundments that meet the RCRA "no migration" standard;
- (6) Impoundments that receive only de minimis quantities of decharacterized wastes;
- (7) Impoundments at facilities that meet the requirements for the pollution prevention compliance alternative; and
- (8) Impoundments that receive only decharacterized wastes that have been treated to meet the UTS.

See, e.g., 60 Fed. Reg. at 43,662. In general, AISI supports the proposed regulatory exemptions. However, it believes that some of the exemptions need to be clarified or modified in certain respects. Each exemption is discussed separately below.

a. Hazardous Waste Impoundments Should Be Excluded from Any Phase IV Surface Impoundment Controls

Hazardous waste impoundments clearly should not be subject to any of the leak, volatilization, or sludge requirements that may be promulgated in the Phase IV rulemaking. This rulemaking is being conducted in response to the court decision in Chem Waste II, and that

decision was focused exclusively on non-hazardous waste surface impoundments. See 976 F.2d at 20 (stating that the "CWA treatment facilities" at issue in the case "do not meet RCRA subtitle C standards and they are regulated solely under RCRA subtitle D (solid wastes)."). Thus, it would be unnecessary and inappropriate to apply the Phase IV restrictions to hazardous waste impoundments.

e. Impoundments that Meet the RCRA "No Migration" Standard
Should be Exempt from Phase IV Surface Impoundment Controls

AISI supports EPA's proposal to exempt from any Phase IV controls impoundments that meet the statutory "no migration" standard. The LDR provisions of RCRA explicitly state that wastes that are otherwise prohibited from land disposal can be placed in a land disposal unit if "it has been demonstrated to the [Agency], to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit ... for as long as the waste remains hazardous." 42 U.S.C. §§ 6924(d)(1), (e)(1), (g)(5). Thus, there is no statutory authority for applying Phase IV controls to "no migration" units. AISI is concerned, however, that EPA is interpreting the "no migration" standard in an inappropriate and unnecessarily stringent manner. Under the Agency's current interpretation, it is doubtful whether any non-hazardous waste surface impoundments would qualify as "no migration" units. Accordingly, an exemption for "no migration" units is unlikely to provide any meaningful relief from Phase IV LDR controls. AISI believes that under a proper interpretation of the "no migration" standard, some non-hazardous waste impoundments might be exempt from Phase IV LDR requirements. For this reason, AISI urges EPA to reconsider its interpretation of the statutory standard.

f. Impoundments that Receive Only De Minimis Quantities of
Formerly Characteristic Wastes Should be Exempt from Phase IV
Surface Impoundment Controls

g. Impoundments that Elect the Pollution Prevention Compliance
Alternative Should be Exempt from Phase IV Surface
Impoundment Controls

AISI supports EPA's proposal to provide a pollution prevention compliance alternative for facilities that otherwise would have to comply with the requirements of the Phase IV rule. As the Agency pointed out in the preamble to the proposed Phase III rule, the court in Chem Waste II indicated that one of the chief goals of the LDR program is to reduce the total mass loading of hazardous constituents entering the environment. 60 Fed. Reg. at 11,713. Pollution prevention is one obvious method for achieving this goal. Accordingly, it should be allowed as an alternative to treatment, if it can achieve reductions in total mass loading that are comparable to what would be achieved if the wastes in question were treated to meet the UTS.

AISI, however, urges EPA to make the pollution prevention compliance alternative as flexible as possible, so as to maximize its potential usefulness, consistent with statutory goals. For example, AISI supports the Agency's apparent position that pollution prevention measures could be applied to any of the wastes entering a surface impoundment, and not just the formerly characteristic wastes. See 60 Fed. Reg. at 11,713. Obviously, the source of the hazardous constituents is unimportant from an environmental perspective. If the mass loadings can be reduced most cost effectively by engaging in pollution prevention with respect to wastes other than the formerly characteristic wastes, there is no reason to require that the reductions come from the formerly characteristic wastes.

AISI also supports the idea of allowing "trading" between pollutants, so that reductions in the mass loading of one constituent through pollution prevention can reduce or even eliminate the need to treat other constituents. See 60 Fed. Reg. at 11,714. If two constituents have similar health effects, there is no apparent reason why the Agency should require that reductions be made for one constituent, rather than the other. The statutory mandate is to minimize risks from whatever source they arise, not to minimize risks associated with particular hazardous constituents. Accordingly, the Agency should authorize trading between pollutants, just as it has done, or has proposed to do, in other related contexts. See, e.g., 40 C.F.R. § 266.106(c)(2) (establishing an overall limit for carcinogenic metals, as opposed to separate limits for individual metals, in emissions from boilers and industrial furnaces that burn hazardous wastes); 40 C.F.R. § 63.112(a) (establishing a single limit for total organic HAPs, rather than separate limits for individual HAPs, in emissions from synthetic organic chemical manufacturing facilities); 59 Fed. Reg. 15,504, 15,548-63 (April 1, 1994) (proposing to allow limited "trading" between the emissions of individual HAPs, pursuant to section 112(g) of the Clean Air Act).

a. Biological and Post-Biological Impoundments Should Be Exempt from Any New RCRA Leak Controls

According to the preamble to the Phase IV proposal, the reason for considering the imposition of surface impoundment leak controls under the LDR program is to ensure that the underlying hazardous constituents in restricted, formerly characteristic wastes are genuinely being treated, rather than simply being released from a surface impoundment into the groundwater underlying the facility. However, if the wastes are being subjected to biological treatment either before they are placed in the impoundment or while they are in the impoundment, there is no reason to be concerned that the constituents are simply being released into the groundwater. In the absence of any such concern, the impoundments should not be subject to additional leak controls under the LDR program.

b. Impoundments Subject to RCRA Corrective Action Should Be Exempt from Any New Leak Controls

As discussed above, approximately half (if not more) of all facilities with impoundments that receive formerly characteristic wastes are TSDFs which are subject to EPA's corrective action authority under RCRA. This authority extends to all SWMUs at the facilities, including any non-hazardous waste surface impoundments that may be present, and thus can be used to address the leaks that are of concern in this rulemaking. Because adequate authority already exists to address leaks from non-hazardous waste impoundments at TSDFs, these facilities should be exempt from any leak control requirements that may be promulgated in the Phase IV rulemaking.

In the case of TSDFs with permits, RCRA § 3004(u) requires the permits to address releases from all SWMUs located at the facility, including non-hazardous waste surface impoundments. Specifically, these facilities must perform facility assessments and/or investigations to identify and evaluate releases from known SWMUs. In addition, they must clean up such releases as necessary to protect human health and the environment. Finally, these facilities generally are required to take similar steps for SWMUs and releases that may be discovered in the future. In these ways, EPA can be assured that leaks from non-hazardous waste impoundments at permitted facilities are already adequately being addressed. Accordingly, no new leak control regulations for permitted facilities are warranted under the LDR program.

In the case of TSDFs operating pursuant to interim status, RCRA § 3008(h) authorizes EPA to issue interim status corrective action orders on a site-specific basis. Such orders can cover all SWMUs at the TSDF, including non-hazardous waste surface impoundments, and can require identification, evaluation, and cleanup of releases from such units, just as in the case of permitted facilities. As a result, adequate cleanup authority already exists for leaks from non-hazardous waste surface impoundments at interim status TSDFs. EPA has also been extremely aggressive in exercising this authority. Accordingly, interim status TSDFs should be exempt from any leak control requirements that may be promulgated under the Phase IV rule. At a minimum, interim status facilities should be exempt from such controls in the following circumstances:

- (1) If the facility already is actively engaged in corrective action for releases from its non-hazardous waste surface impoundments (in which case the releases of concern clearly are being directly addressed);
- (2) If the facility is currently subject to an interim status corrective action order (in which case EPA already is focused on risks that may be present at the facility and a mechanism already exists for quickly addressing any risks that may be determined to be significant);
- (3) If the facility is ranked "high" or "medium" priority on the National Corrective Action Priority System ("NCAPS") list (in which case the Agency has already reached a tentative conclusion about potential risks at the facility and can be expected to take corrective measures in the near future);

- (4) If the facility has already been investigated and a determination has been made that there are no leaks that warrant corrective action; or
- (5) If the facility is currently undergoing an investigation..

c. Impoundments Subject to State Groundwater Protection Programs
Should Be Exempt from Any New RCRA Leak Controls

As EPA acknowledges in the preamble to the Phase IV proposal, many states have groundwater protection programs that apply to non-hazardous waste surface impoundments managing formerly characteristic wastes. Several of these programs include groundwater monitoring and corrective action requirements similar to those that are currently under consideration by EPA as part of the Phase IV rule. Clearly, where such state programs exist, no additional federal controls are necessary. Accordingly, surface impoundments subject to such state regulatory programs should be exempt from any Phase IV leak controls.

AISI is concerned, however, that EPA may limit the exemption in question to surface impoundments subject to state programs that are virtually identical to the federal controls currently under consideration. This approach would unnecessarily restrict the exemption and could render it almost entirely meaningless. After all, few, if any, state programs can be expected to replicate exactly federal regulations that are as of yet unwritten. The existing state programs, however, may be adequately protective of human health and the environment. For example, a state program may not explicitly address the full range of UTS constituents, but may address constituents that have been determined (on a site-specific or generic basis) to be the most important parameters or suitable indicators for other key parameters. Similarly, a state program may not use the same corrective action triggers as the federal program, but may use a different set of triggers that have been determined to be appropriate, based on the character and likely use of the underlying groundwater. AISI encourages EPA to adopt a flexible approach for implementing this regulatory exemption, so that unnecessary burdens can be avoided, while protecting human health and the environment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final

rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P036
COMMENTS AMER. IRON AND STEEL INST.
RESPONDER SS
SUBJECT EQUV
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COMMENT

3. Any New Air Emission Control Regulations Promulgated by EPA Should Be Tailored to Address the Risks of Concern

If, despite the arguments presented above, any non-hazardous surface impoundments managing formerly characteristic wastes are not exempted from the Phase IV rule and therefore become subject to the requirements of Subpart CC, the resources spent in regulatory compliance would not significantly further the goals of the land disposal restrictions program. According to the preamble to the Phase IV proposal, the reason for considering the imposition of air emission controls under the LDR program is to ensure that the underlying hazardous constituents in restricted, formerly characteristic wastes are genuinely treated, rather than simply volatilized into the air. In the present case, however, there can be no doubt that the formerly characteristic wastes in question are subjected to bona fide biological treatment prior to placement into a surface impoundment, even if such treatment does not achieve the stringent requirements for efficiency set forth in the Subpart CC rules. Accordingly, additional air emission controls are not needed to ensure that hazardous constituents are not simply being transferred into the atmosphere.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the

Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENT

4. Any Sludge Control Regulations Promulgated by EPA Should Exempt Certain Key Categories of Sludges

As discussed above, AISI believes that EPA can and should continue to rely on existing regulatory programs to address sludges removed from non-hazardous waste surface impoundments that manage formerly characteristic wastes. See Section II.C.3. AISI also believes that requiring such sludges to be treated to meet the UTS standards for all underlying hazardous constituents would unnecessarily impose exorbitant costs on domestic industry. For example, one AISI member company has estimated that it would cost approximately \$150 to \$250 per ton to treat the sludges removed from surface impoundments associated with cokemaking operations for the organic hazardous constituents that they contain (using either low-temperature or high-temperature thermal desorption). Based on an estimated 1,000,000 cubic feet of sludge in just one such surface impoundment, the total cost of treatment for the sludges in the single impoundment would be between \$3.75 million and \$6.25 million (not counting other expenses, such as the costs of removing, transporting, and ultimately disposing of the sludge). These costs cannot be justified, given existing regulatory controls that already adequately address the risks of concern. Accordingly, EPA should not establish any sludge controls as part of the Phase IV rule.

According to the preamble to the Phase IV proposal, the reason for considering the imposition of surface impoundment sludge controls under the LDR program is to ensure that the underlying hazardous constituents in restricted, formerly characteristic wastes are genuinely treated, rather than simply transferred into the sludge and released into the environment at another site. However, if the wastes are subjected to biological treatment either before they are placed in the impoundment or while they are in the impoundment, there is no reason to be concerned that the constituents are simply being transferred into the sludge. In the absence of any such concern, the sludge should not be subjected to additional controls under the LDR program.

As noted above, facilities with RCRA permits or operating pursuant to interim status are subject to corrective action for SWMUs located at the facility. Non-hazardous waste surface impoundments managing formerly characteristic wastes clearly qualify as SWMUs. Thus, any releases from these impoundments are already subject to EPA's corrective action authority if they are located at permitted or interim status TSDFs. EPA obviously could use this authority to

require removal of sludges from an impoundment. Likewise, it could require that such sludges, once removed, are managed in a protective manner, either on-site or off-site. In this way, the risks associated with sludges generated at these facilities already can be adequately addressed under existing regulatory authorities. Accordingly, these sludges should be exempt from any Phase IV sludge controls.

Sludges disposed at facilities that meet the federal criteria for new municipal solid waste landfills under Subtitle D of RCRA also should be exempt from any new controls that may be promulgated under the Phase IV rule. The Subtitle D criteria were developed specifically to address the risks associated with the disposal of non-hazardous solid wastes. The criteria require, among other things, that landfills install liners, conduct groundwater monitoring, and engage in unit-specific corrective action, as necessary to protect human health and the environment. See 40 C.F.R. Part 258. These criteria ensure that hazardous constituents in non-hazardous solid wastes are not freely being released into the environment. Indeed, EPA has proposed to use these same criteria as the basis of leak controls for surface impoundments under the Phase IV rule. To the extent that the Subtitle D criteria are deemed adequately protective for leaks, they should also be deemed adequately protective for sludges. Accordingly, sludges disposed at facilities that meet the Subtitle D criteria should be exempted from further controls under the Phase IV rule.

Sludges disposed at facilities that meet applicable state regulatory requirements likewise should be exempt from any Phase IV controls. As in the case of the federal Subtitle D criteria, state requirements for industrial landfills are designed to address the risks associated with disposal of non-hazardous wastes, such as sludges. Indeed, these requirements are frequently tailored to the particular risks posed by individual landfills. In light of the protections afforded by these state requirements, additional controls under the LDR program are not warranted. Thus, sludges disposed at facilities that meet applicable state regulatory requirements should be exempt from any Phase IV sludge controls.

Finally, EPA should clarify that sludges destined for reclamation would not be subject to any requirements under the Phase IV rule. Under the RCRA regulations, sludges destined for reclamation are classified as solid wastes only if they are explicitly listed as hazardous wastes. See 40 C.F.R. § 261.2, Table 1. Non-hazardous sludges from surface impoundments that receive formerly characteristic wastes clearly are not listed as hazardous wastes and therefore are not solid wastes when destined for reclamation. As non-wastes, these sludges are not subject to any requirements under the LDR program. See, e.g., 55 Fed. Reg. at 22,660 ("EPA ... will continue to provide exclusions from the land disposal restrictions for waste excluded from the definition of hazardous or solid waste under 40 CFR 261.2-.6."). Accordingly, sludges destined for reclamation must be excluded from the requirements of the Phase IV rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that

underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENTS AMER. IRON AND STEEL INST.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 036
COMMENT

E. EPA Should Not, and Indeed Cannot, Require Formerly Characteristic Wastes to be Treated to Minimize Risks Before Being Placed in a Surface Impoundment

The third and final option proposed by EPA to control potential cross-media transfers of hazardous constituents from non-hazardous waste surface impoundments receiving formerly characteristic wastes is to require that those wastes be treated to meet all applicable UTS standards prior to being placed in the impoundments, except in those cases where the impoundments meet the RCRA minimum technology requirements or the statutory "no-migration" standard. 60 Fed. Reg. at 43,675. EPA has indicated in the preamble to the proposed rule that it does not favor, and thus is not recommending, adoption of this "Option 3" approach, as it would cause costly and unwarranted disruption of existing wastewater treatment systems, and would "destroy the very accommodation between the CWA and RCRA upheld by the D.C. Circuit" in *Chem Waste II*. Id. at 43,659, 43,675.

AISI agrees with EPA that proposed "Option 3" would be enormously disruptive of industrial wastewater treatment processes and is not necessary to protect human health and the environment. As previously discussed, existing state and federal regulations are adequate to protect against excessive cross-media transfers of hazardous constituents from formerly characteristic wastes that are managed in non-hazardous waste surface impoundments. Moreover, Option 3 would impose exorbitant costs on the regulated community. For example, one AISI member company expects that, if EPA were to adopt Option 3, it would have little choice but to replace its CWA surface impoundments with tank-based treatment technologies, at a cost of approximately \$100 million at just one of its integrated iron and steelmaking facilities. Clearly, these costs cannot be justified by the negligible benefits of adopting Option 3. Accordingly, under the principles set forth in Executive Order 12,866, the Agency must reject that option.

Perhaps even more importantly, as EPA has observed, "the Court [in *Chem Waste II*] clearly did not intend to require that treatment standards be met invariably by treatment preceding impoundment-based management systems." 60 Fed. Reg. at 43,656. On the contrary, the D.C. Circuit explicitly recognized that:

RCRA section 1006(b)(1) contemplates some accommodation with existing CWA systems; to strictly apply each RCRA prohibition [prior to placing decharacterized wastes into a surface impoundment that is part of a CWA treatment system] would nullify section 1006(b)(1) and, we think, would be untrue to Congress's intent.

Chem Waste II, 976 F.2d at 24. Thus, the Court ruled that decharacterized wastes that do not yet meet all applicable LDR treatment standards may be placed in CWA-regulated surface impoundments so long as the ultimate discharge from the facility satisfies those standards. *Id.* at 23-24. EPA's proposed Option 3 would "effectively invalidate[]" CWA treatment systems, without regard to the actual performance of those systems, and therefore would contravene section 1006(b)(1) of RCRA. For this reason, Option 3 must not be adopted in the final Phase IV rule. See 60 Fed. Reg. at 43,677.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P041
COMMENTS Commenter Sterling
RESPONDER SS
SUBJECT EQUV
SUBJNUM 041
COMMENT

While Sterling continues to believe that the Chem Waste court's reading of RCRA is labored at best, and far exceeds the statutory mandate, we believe that EPA has developed a framework, which, with important clarifications and minor revisions, responds to this opinion and attempts to provide reasonable accommodation between the two regulatory schemes. Sterling endorses the general comments being submitted today by the Chemical Manufacturers Association ("CMA") on both the treatment equivalency issues related to Clean Water Act ("CWA") impoundments and on the underground injection well issues.

Option One, which essentially defers to the Phase III proposal and the Clean Water Act and other existing regulatory schemes to ensure equivalent treatment of underlying hazardous constituents, is the only legally-supportable approach that EPA can take. Having said that, Sterling urges EPA to evaluate and respond to all comments on the Phase III rule (including the point of generation issue raised in that rulemaking) before it finalizes the Phase IV proposal. The comments on the two rulemakings should be evaluated by the same EPA staff and considered together because the issues are very intertwined.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

EPA evaluated and responded to all comments on the Phase III rule, before finalizing the Phase IV rule. EPA's responses to comments received on the Phase III proposed rulemaking are contained in the Comment Response Document developed for the Phase III final rule, which is included in the docket for the Phase III final rulemaking.

The Agency notes the commenter's support for the comments submitted by the CMA.

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COMMENTS Commenter Sterling
RESPONDER SS
SUBJECT EQUV
SUBJNUM 041
COMMENT

Sterling endorses, and incorporates here by reference, the comments submitted by CMA's Underground Injection Control Task Group ("UIC Group") on the impact of the Phase IV proposal on underground injection wells. Sterling is particularly concerned about the potential impact of the proposal on Class I wells that are operating with no migration petitions. Specifically, EPA should clarify that, for Class I wells operating with approved no migration petitions: (1) the LDRs do not apply to decharacterized wastes; and (2) waste codes for newly-listed or characteristic wastes may be added as a non-substantive revision to the approved petition. And EPA should revise the notification requirements, as proposed, to reduce reporting burdens for Class I wells with approved petitions.

The CMA UIC Group has elaborated on each of these issues, and Sterling will not repeat those comments. We do want to emphasize, however, that the entire point of the no migration petition process is to demonstrate, consistent with RCRA's directive, that injected waste will remain safely confined within the injection zone as long as the waste remains hazardous. If the wastestream that was the subject of the extensive analysis and modeling undertaken during the petition process has not changed, but rather it is EPA's method of characterizing the waste that has now changed, there is no legally supportable basis for requiring a modification to the petition.

RESPONSE:

The Agency notes the commenter's support for the comments submitted by CMA's Underground Injection Control Task Group.

Facilities that inject newly identified and listed wastes and/or mineral processing wastes covered in the Phase IV final rule into Class I injection wells, will have to make a demonstration of no migration to be relieved of the prohibitions for these wastes. However, the Agency understands that none of the facilities affected by the Phase IV final rule that dispose of such wastes in Class I injection wells transport their waste off-site or have the necessary capacity to treat their waste on-site by BDAT. For those facilities affected by the prohibitions which are unable to make a successful no-migration demonstration, and/or are unable to meet the requirements of other treatment options promulgated in the Phase IV final rule, constructing a treatment facility on-site

would be the only permissible alternative in meeting LDR treatment standards for their hazardous wastes. The Agency understands that constructing a treatment facility on-site would require a substantial amount of time and effort. Therefore, the Agency is granting a two-year national capacity variance for these wastes.

The commenter suggested that EPA state that additional of waste codes to a no-migration petition should be considered a non-substantive revision. This issue is outside the scope of the Phase IV rules. The commenter should contact the USEPA Office of Water.

DCN PH4P041
COMMENTS Commenter Sterling
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 041
COMMENT

In general, Sterling supports EPA's efforts to craft a set of regulations that both respond to the court's decision in *Chemical Waste Management v. EPA*, ("Chem Waste") and that seek the accommodation between the Clean Water Act and RCRA that the statute demands.

While Sterling continues to believe that the Chem Waste court's reading of RCRA is labored at best, and far exceeds the statutory mandate, we believe that EPA has developed a framework, which, with important clarifications and minor revisions, responds to this opinion and attempts to provide reasonable accommodation between the two regulatory schemes. Sterling endorses the general comments being submitted today by the Chemical Manufacturers Association ("CMA") on both the treatment equivalency issues related to Clean Water Act ("CWA") impoundments and on the underground injection well issues.

In requiring EPA to address the treatment of hazardous constituents of non-hazardous wastes, the Chem Waste court misreads RCRA and imposes an undue burden on the regulated community, with no corresponding environmental benefit. In fact, EPA has acknowledged that it is compelled to address the treatment equivalency issue at this time, although if left to its own devices, it would probably have higher environmental priorities. 60 Fed. Reg. 43,656 colt 2 (1995). The Chem Waste court was wrong and EPA's proposal to impose any requirements beyond Option One would be equally wrong.

Sterling manages decharacterized wastewater in a land-based surface impoundment system that discharges to a POTW. Sterling has invested \$36,000,000.00 in the past six years to upgrade its treatment system to meet the requirements of three significant rulemakings that affected its wastewater management: the Organic Chemicals, Plastics, and Synthetic Fibers or OCPSF pretreatment standards; the NESHAP for benzene; and the Toxicity Characteristic rule, or TC. We are also subject to the Hazardous Organic NESHAP, or HON rule, and are facing pending MACT standards. In addition, we are a permitted TSD and thus are subject to Corrective Action requirements. Sterling, therefore, supports EPA's proposal

to assume that impoundments located at permitted TSDFs are subject to sufficient regulatory control, and thus achieve equivalent treatment for purposes of the Chem Waste court's ruling, and therefore should not be subject to further regulation under the proposed Phase IV rules. If Sterling were otherwise subject to the phase IV proposal, however, Option One is the only proposed option that would make any sense at the Sterling facility given the existing, intense regulation of the wastewater in question and the system that manages it. Sterling's support of Option One is qualified, however, unless EPA corrects a fatal flaw in the underlying scheme proposed in the Phase III rule.

While Sterling supports EPA's proposal in Phase III to defer to the Clean Water Act standards for equivalent treatment determinations, EPA has imposed a treatment standard for total cyanide(TCN) in wastewaters managed in CWA systems that cannot be met by the best demonstrated available technology. Sterling operates a treatment system for its sodium cyanide wastestream that includes both thermal decomposition and alkaline chlorination--yet, the TCN limit of 1.2 ppm promulgated as a universal treatment standard ("UTS") for TCN in DO18 wastewaters cannot be achieved on a consistent basis. Sterling and DuPont (DuPont owns, Sterling operates the unit in question) submitted a complete treatability data set to EPA in the Phase III context, which we incorporate here by reference. While we raised this issue with the Agency in the Phase III context, we mention it again in our Phase IV comments because Option One essentially defers to the Phase III solution for determining equivalent treatment of decharacterized wastewaters managed in CWA systems. Unless EPA's proposal in Phase III is legally sound, its reliance on Phase III in this Phase IV rulemaking as the Option One solution will be legally flawed.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996,

EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P042
COMMENTS MONSANTO
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 042
COMMENT

The Agency clearly should opt to select Option 1, electing not to promulgate LDR-based standards related to possible releases from impoundment based systems. The Agency's own analysis clearly demonstrates that there is little risk associated with these potential releases, but that the Agency feels it "is required to address these issues at this time although there may have been higher environmental priorities if EPA had sole discretion to order its agenda." (60 FR43656, 8/22.95) Further, the comments submitted by CMA demonstrate that the Agency's analysis of risk grossly overstates any actual risk that may be caused by these releases.

Even if there had been a finding of risk, it is clear that such risk would be associated with possible pathways that are fully subject to the authorities that the Agency has from other statutory sources.

Air emissions are subject to regulation under the Clean Air Act and at least five (5) other rulemakings are completed or underway to address impoundments under CAA Section 112.

Groundwater protection can be addressed under Subtitle D of RCRA and in fact many states have moved to do this. A CMA study has demonstrated that all 50 states have regulatory programs in place for non-hazardous wastes. In the 25 states which account for 83% of the wastewaters managed in surface impoundments: 1) all require monitoring to protect surface waters, 2) 19 have liner requirements, and 3) 19 require groundwater monitoring. While some will argue that these rules need to be strengthened, clearly that is the question that should be addressed via state programs and not the question of whether we should stretch the federal hazardous waste treatment rules to regulate non-hazardous impoundments. EPA has the authority under RCRA SUBTITLE D to assist the states through the development of guidelines for the regulation of non-hazardous waste management. EPA and the states have in fact recently established a multi-stakeholder dialogue group to that end, including EPA, state, environmental group, generator industry and disposal industry representatives. Section 1006(b) of RCRA requires the EPA to "avoid duplication to the maximum extent practicable" with the provisions of other

statutes. We urge the Agency to do that, selecting Option 1 in this rulemaking.

Finally, it must be noted that the Phase IV rulemaking, as directed at potential releases from surface impoundments, is not driven by any mandate of the underlying court decision (*Chemical Waste Management v. EPA*, 976 F. 2d 2, 1992). EPA itself has noted that "The court did not explicitly state that its equivalence test, or any other part of the opinion, necessitated control of all hazardous constituent releases from surface impoundments." The court did address the need to seek treatment that is equivalent to usual RCRA treatment, but "The focus here is on the wastewaters being treated, and the amount of hazardous constituents removed from those wastewaters, not other types of wastes (like sludges) or other types of releases." (60 FR 43656,8/22/95).

Again, we urge the Agency to adopt Option 1 of its August 22 proposal. Regulations of possible releases to air and groundwater under Land Disposal authorities is not warranted, is not driven by the court decision, and is more properly addressed under other statutes.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER HM

SUBJECT EQUV

COMMENT • Sludges comprise a new treatability group and are not, therefore, covered by the LDRs unless they exhibit a hazardous characteristic.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER HM

SUBJECT EQUV

COMMENTS Sludges Generated In CWA Treatment Impoundments Comprise A New Treatability Group And Are Not Therefore Covered By The LDRs Unless The Sludges Are Themselves A Characteristic Hazardous Waste. As part of the final Third-Third Rule, EPA developed specific "decision rules" (hereinafter, "treatability group rules"), which make absolutely clear that non-hazardous sludge generated during treatment of characteristic wastewater is not "prohibited waste" and not subject to LDR regulations. See 55 Fed. Reg. 22520, 22661-662 (June 1, 1990). Nobody challenged the Agency's conclusion in the CWM litigation. In its Phase IV proposal, EPA aptly observes that the CWM court did not address -- let alone remand or vacate -- the treatability group rules, which, in EPA's own words, mandate that "wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, notwithstanding that they may derive from prohibited wastewaters." 60 Fed. Reg. 43654, 43656, col.3 (Aug. 22, 1995). Because the CWM litigation left the treatability group rules intact, EPA must follow them and refrain from imposing special LDR regulations on non-hazardous sludge. Treatability Group Rules. EPA developed the treatability group rules in an effort to spell out exactly how LDR regulations apply to wastestreams that change physical form (i.e. change "treatability group") during treatment. The Agency made a special effort to clarify how the regulations apply -- and don't apply -- to circumstances where suspended solids settle out of wastewater to form sludge. As EPA put it, The question of whether a given waste is going to prohibited land disposal is complicated by the fact that wastes may change treatability groups after undergoing treatment. For example, treatment of a wastewater often generates a non-wastewater sludge as well as a treated wastewater. 55 Fed. Reg. at 22661, col. 1 (June 1, 1990). After careful consideration, EPA concluded that LDR regulations do not apply to non-hazardous material that results from the treatment of characteristic wastes unless such non-hazardous material is in the same treatability group as the characteristic waste. 55 Fed. Reg. at 22661, col. 3. EPA stated that "this approach is necessary to ensure that [LDR treatment levels] are met by treatment and not by dilution." 55 Fed. Reg. at 22661-62. EPA specifically determined that LDR regulations do not apply to

non-hazardous sludge generated from the treatment of wastewater that exhibits a hazardous characteristic. EPA used the following example to illustrate how the rule works: Wastewater J is EP toxic for lead. It is treated in a tank and generates a sludge K, that is non-hazardous. The treated wastewater L, which no longer exhibits a characteristic, is then sent to a surface impoundment for further treatment, after which it is discharged under an NPDES permit. The sludge is sent to a landfill. The sludge K is not a restricted hazardous waste, notwithstanding that it derives from treatment of a characteristic hazardous waste. This is because it is a new treatability group which is not hazardous at the point of generation. The status of wastewaters J and L is determined by the special rules for characteristic wastes managed in CWA systems; therefore, they are prohibited wastes but are not subject to a dilution prohibition. Since wastewater L meets the treatment standard when it is land disposed, the disposal is legal. 55 Fed. Reg. at 22662, col. 1 (emphasis added). Conclusion. The treatability group rules clearly place non-hazardous sludge beyond the scope of the Phase IV rulemaking. Moreover, the rules shed light on why the CWM Court did not require EPA to develop special LDR regulations for sludge. The D.C. Circuit carefully read the Third-Third Rule, including EPA's explicit discussion of its treatability group concept, and concluded that LDR regulations don't apply to sludge. It therefore held that RCRA equivalency could be achieved through the treatment of wastewater only. In EPA's own words, [The CWM Court did not say] that hazardous constituents in deposited sludges must be treated. The court in fact did not speak to the principle stated by EPA in the Third Third rule that generation of a new treatability group is considered to be a new point of generation and thus a new point for determining whether a waste is prohibited. 55 FR at 22661-662. Under this principle, unchallenged in the litigation, wastewater treatment sludges not exhibiting a characteristic are not prohibited wastes, notwithstanding that they may derive from prohibited wastewaters. 60 Fed. Reg. at 43656, col. 3 (Aug. 22, 1995). To comply with the CWM opinion and its own treatability group rules, EPA must therefore exclude sludge from the Phase IV rule.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean

Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT For the reasons summarized below and discussed in detail throughout these comments, AF&PA's agrees that Option 3 should be rejected and urges that EPA adopt Option 1. • End-of pipe equivalence is all that the Chemical Waste Management decision or RCRA requires. EPA need not, therefore, consider controls for leaks, sludges, or air emissions from Clean Water Act surface impoundments that manage decharacterized corrosive waste.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTER American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT ● The proponent of Options 2 and 3 has not come forward with any factual basis supporting either alternative. EPA must, therefore, reject both Options. ● If EPA nonetheless decides to examine Phase IV controls, it correctly concluded that "bare releases" do not trigger LDR requirements. ● EPA should tailor its Phase IV rule decision to each industry studied in the RIA.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTER American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT ● EPA has twice postponed the effective date of the Subpart CC rules so it can reassess fundamental elements of the rule, its underlying test method, risk assessment, and applicability principles. EPA should not, therefore, base any part of the Phase IV risk assessment or control options on Subpart CC until EPA completes this review.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT • EPA has correctly rejected Option 3.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTER American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT ● The 1% flow limit in the proposed de minimis exception for decharacterized wastewater precludes significant relief to industries that practice aggressive water conservation. ● EPA should exclude paper industry pre-biological sludge from Option 2 controls, because the RIA shows no significant risk from this source even at DAF=6. ● EPA correctly avoids regulatory duplication by deferring Option 2 controls to other federal programs, such as the paper industry MACT rules. But EPA should defer completely to the MACT rules, even if they have a different trigger level than the Subpart CC rules, because the MACT rules will reduce VOC concentrations in paper industry wastewater by 98% and will essentially obviate methanol and chloroform --the principal paper industry wastewater VOCs -- as constituents of concern.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT Neither RCRA Nor The Chemical Waste Management Decision Require EPA To Impose Land Disposal Restriction ("LDR") Requirements On CWA Surface Impoundments In Addition To The End-Of-Pipe Treatment Standards Already Proposed In The Phase III Rule. In *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C. Cir. 1992), cert. denied 113 S.Ct. 1961 (1992) ("CWM"), the U.S. Court of Appeals for the District of Columbia remanded portions of the Agency's Third Third Rule that established a "deactivation" treatment standard for ignitable, corrosive, and reactive ("ICR") wastes. The Court did so because deactivation could be accomplished by dilution, which although a permissible treatment method for certain ICR wastes, did not necessarily address underlying hazardous constituents ("UHCs") that may be present in decharacterized wastestreams. *Id.* at 16-18. The D.C. Circuit found that deactivation of corrosive wastes by dilution was a legitimate treatment method, but it could be used as the exclusive treatment method only if any UHCs present in the characteristic wastes are treated to the same extent as they would be in non-CWA treatment facilities. Significantly, the Court recognized that "RCRA requires some accommodation with [the] Clean Water Act" and, to that end, authorized "minimized threat" treatment to occur in land-based surface impoundments. *Id.* at 20, 23-24. All the Court required is that "what leaves a CWA treatment facility can be no more toxic than if the waste streams were individually treated pursuant to the RCRA treatment standards." *Id.* at 20. EPA refers to this requirement as the "equivalency determination." The Agency has addressed what it calls end-of-pipe-equivalence in its March 2, 1995 proposed Phase III Rules. In general, AF&PA endorsed the Agency's general Phase III approach, which equated CWA effluent limitations with minimized threat levels. But AF&PA told the Agency that end-of-pipe-equivalence was all that the CWM Court required. Although EPA candidly disclosed in the preamble that it had higher environmental priorities, it nonetheless issued its Phase IV proposals because it was compelled to do so by a settlement agreement with some of the CWM litigants. 60 Fed. Reg. 43656. That settlement agreement requires only that EPA describe several options beyond Phase III-equivalency, but does not require that the Agency recommend, endorse, or adopt any of

them. *Id.* AF&PA remains of the view that the CWM opinion does not require EPA to impose any LDR requirements beyond those proposed in the Phase III Rules. If the Court intended to require CWA surface impoundments that handle decharacterized wastewater (hereinafter, "CWASIs") to do more than demonstrate end-of-pipe-equivalence, it would have spelled out such additional requirements in its opinion. Instead, it clearly and simply requires a demonstration of end-of-pipe-equivalence and nothing more. The Court rendered a highly technical opinion that resolved litigation among well-financed, motivated parties with significant incentives to direct the Court's attention to all relevant issues. In the ten months between the first petition for review and entry of the Court's decision, the Court reviewed briefs from environmental groups, industry groups, and EPA that thoroughly addressed the consequences of managing decharacterized wastewater in CWASIs, including sludge precipitation and potential leakage and air emissions. Based on the comprehensive information before it, the Court made an informed decision to require CWASIs to demonstrate end-of-pipe-equivalence and declined to spell out any other LDR requirements they must meet. EPA is correct when it observed in the Phase IV preamble that "the court did not explicitly state that its equivalence test, or any other part of the opinion, necessitated control of all hazardous constituent releases from surface impoundments." 60 Fed. Reg. 43656. Given the high stakes and technical nature of the litigation, it strains credulity, and presumes an uncharacteristic degree of sloppiness on behalf of the Court, to assert that the D.C. Circuit intended to impose LDR requirements it did not clearly articulate in its opinion. *The CWM Court Held That End-of-Pipe Treatment Standards For CWASIs Satisfy RCRA LDR Requirements. The CWM Court held that allowing placement of decharacterized wastewater in CWASIs represents a reasonable accommodation of CWA and RCRA objectives, and therefore satisfies RCRA LDR requirements, as long as material exiting CWASIs is treated to the same extent required by RCRA. See 976 F.2d 2, 23. The Court fully appreciated that decharacterized wastewater is held temporarily in unlined CWASIs and eventually exits or "discharges" into navigable waters of the United States or publicly owned treatment works ("POTW"). Id. at 20, 24. The Court also recognized that levels of pollutants in decharacterized wastewater passing the exit point, or "end-of-the-pipe," are regulated by NPDES permits. Id. at 20. With full knowledge of*

how CWA systems operate, the Court required unlined CWASIs to demonstrate end-of-pipe-equivalence to comply with RCRA -- nothing more. The Court articulated its position at two points in its opinion, in each case making clear that end-of-pipe treatment standards satisfy statutory LDR requirements: [Decharacterized] wastes may be placed in . . . impoundments that are part of an integrated CWA treatment train. However, in order for true "accommodation" to be accomplished, we find that RCRA treatment requirements cannot be ignored merely because CWA [sic] is implicated Thus, we hold that, whenever wastes are put in CWA surface impoundments before they have been treated pursuant to RCRA to reduce the toxicity of all hazardous constituents, these wastes must be so treated before exiting the CWA treatment facilities. In other words, CWA facilities must remove the characteristic and decrease the toxicity of the waste's hazardous constituents to the same degree that treatment outside a CWA system would. *Id.* at 22 (emphasis added). [D]echaracterized waste [containing hazardous constituents] may be placed in a surface impoundment if and only if the resulting CWA treatment fully complies with § 3004(m)(1). In other words, the material that comes out of CWA treatment facilities that employ surface impoundments must remove the hazardous constituents to the same extent that any other treatment facility that complies with RCRA does. *Id.* at 23 (emphasis added). At no other point in the opinion does the Court specify LDR treatment standards that CWASIs must satisfy to comply with RCRA (save volatilization of VOCs when ignitable wastes are diluted). Therefore, no additional LDR standards are required. The CWM Court Did Not Require LDR Regulations Addressing The Sludge That Forms In CWASIs. The Court made an informed decision not to require EPA to promulgate special LDR regulations addressing sludge that is formed in CWASIs. Instead, the Court held that sludge generated from the treatment of decharacterized wastewater in CWASIs is covered by RCRA Subtitle C only if the sludge itself is a hazardous waste. *Id.* at 24, note 10. Briefs submitted by the litigants in the CWM proceeding made the Court well aware that treating decharacterized wastewater in CWASIs results in the precipitation of sludge. See NRDC Petitioners Brief at 64 (Metal-bearing wastewater can evaporate to reconcentrate toxic metals.); Industry Intervenors Brief at 29 (Treatment in CWASIs removes metals by precipitation.); Industry Intervenors Brief at 31 (Precipitation of metals into sludge occurs in surface impoundments.); EPA Response Brief at 69

(Treatment of wastewater in CWASIs normally results in the precipitation of metal hydroxide sludges.); EPA Response Brief at 91 (Low TOC ignitable wastes managed in wastewater treatment systems generate non-hazardous sludges.). In support of its position that RCRA's accommodation provision (§ 1006(b)(1)) allows placement of decharacterized wastewater in CWASIs, EPA argued that its Subtitle C regulations would satisfy the RCRA objective of protecting groundwater from toxic constituents of sludge: NRDC Petitioners argue . . . RCRA's groundwater protection standard is not satisfied by CWA regulation of discharges to surface water. NRDC Br. at 64-68. It is true that CWA rules do not explicitly protect groundwater; this is not to say, however, that EPA is precluded under RCRA from balancing CWA and RCRA objectives in integrating the RCRA dilution prohibition and the CWA rules. First, if a regulated hazardous waste -- e.g., a toxic sludge -- precipitates out from non-hazardous wastewaters disposed in the surface impoundment, then that unit becomes subject to subtitle C regulation. 55 Fed. Reg. 39,409, 39,410/3 (Sept. 27, 1990). NRDC Petitioners' assertion that such hazardous sludges could be generated in these impoundments and escape subtitle C is thus simply incorrect. Compare NRDC Br. at 64. EPA Response Brief at 68-69. In its discussion of accommodation of CWA and RCRA pursuant to RCRA § 1006(b)(1), the Court wholeheartedly embraced EPA's position. It held that allowing placement of decharacterized waste in CWASIs is a reasonable accommodation, in part, because RCRA Subtitle C will protect the environment from threats posed by hazardous sludge that may precipitate during treatment. See 976 F.2d at 24, note 10. In the Court's words, [A]s the EPA concedes in its brief, if the stream entering the surface impoundment is not decharacterized, then RCRA requires the impoundment to meet subtitle C requirements. Similarly, any hazardous precipitate or other hazardous material generated during CWA treatment must be managed in accord with subtitle C. *Id.* (emphasis added). The text of the opinion, read in conjunction with the briefs submitted to the Court, therefore shows that the Court carefully considered the issue of sludge precipitation and decided that regulation of sludge is required only if it is a listed or characteristic hazardous waste. If the Court wanted to impose LDR requirements for non-hazardous sludge, it certainly would have made its intentions clear. The CWM Court Did Not Require LDR Regulations Addressing Leakage From CWASIs. The CWM Court focused its analysis exclusively on

high volume wastewater that typically passes through CWASIs into navigable waters and POTWs. See 976 F.2d at 24. With respect to such wastewater the Court determined, as discussed above, that end-of-pipe-equivalence satisfies RCRA LDR requirements. The Court did not assess the issue of potential leakage from CWASIs, let alone mandate special LDR requirements to address it. Briefs submitted by the litigants in the CWM proceeding made the Court well aware that the CWASIs had the potential to leak. The NRDC Petitioners continually referred to CWASIs as "unlined" surface impoundments, a term which the Court used to discuss CWASIs in its opinion. Compare NRDC Petitioners Brief at 26, 59, 60 with 976 F.2d at 20. Obviously, the term "unlined" implies the possibility that CWASIs may leak. Likewise, the Court accepted at face value assertions made by EPA and Industry Intervenor that imposing LDR rules on CWASIs would require "major revamping" of CWA treatment systems, in part because CWASIs cannot qualify for "no-migration variances" that would allow them to receive hazardous waste. Compare Industry Intervenor Brief at 33-35 and EPA Response Brief at 64-67 with 976 F.2d at 21. EPA went so far as to assert that sludges produced during treatment in CWASIs "typically leach low, relatively minimal levels of metals" -- a position not inconsistent with the NRDC Petitioners claim that toxic metals can leach from CWA surface impoundments into groundwater. Compare EPA Response Brief at 69 with NRDC Petitioners Brief at 64-68. After a full opportunity to review assertions concerning leakage presented by the litigants, the Court decided to say nothing about it. Perhaps the Court concluded that RCRA's accommodation provision (§ 1006(b)(1)) gave EPA discretion to decline to address leakage in light of the massive disruption and minor environmental benefits that would result. Whatever the Court's reasoning, the fact that it decided not to require LDR rules addressing leakage is unmistakable. Accordingly, EPA cannot invoke the CWM opinion to justify Phase IV regulations. The Court Did Not Assess The Application Of LDR Treatment Standards To Air Emissions From Material Placed In CWASIs. EPA can find no support for across-the-board Phase IV air emission rules in the CWM opinion for the simple reason that, with one limited exception, the opinion did not discuss controlling air emissions from materials placed in CWASIs. The Court confined its discussion of air emissions to the portion of its holding that vacated EPA's deactivation standard for ignitable wastes on the grounds that diluting ignitable wastes emits high levels of

VOCs. See 976 F.2d at 16-17. The Court never addressed whether LDR treatment requirements must cover air emissions from decharacterized corrosive or reactive waste managed in a CWASI. * * * * As this analysis of the CWM decision shows, the D.C. Circuit confined its pronouncements about RCRA equivalency to wastewaters. EPA recognizes the Court's narrow focus when it said in the preamble "the focus here is on the wastewaters being treated, and the amount of hazardous constituents removed from those wastewaters, not other types of wastes (like sludges) or other types of releases." 60 Fed. Reg. 43656. Thus, EPA's Option 1 is the correct course; the Agency need not promulgate LDR requirements beyond those proposed in the Phase III rules, which meet both the Court's conclusion that "RCRA requires some accommodation with [the] Clean Water Act" and also ensure that "what leaves a CWA treatment facility can be no more toxic than if the waste streams were individually treated pursuant to the RCRA treatment standards." CWM, 976 F.2d at 20.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTER American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT the Proponent Of Options 2 And 3 Has Not Come Forward With Any Factual Basis Supporting Either Alternative. Consequently The Agency Should Reject Both Options. The Agency's preamble discussion of Options 2 and 3 is premised on a settlement agreement between the Agency and several CWM litigants ("NRDC Petitioners") in which the Agency agreed "to describe in detail . . . (but not necessarily recommend or endorse) . . . option[s] . . . limiting release[s] from surface impoundments used in CWA treatment systems . . . due to volatilization or leakage, and treatment standards . . . [for] impoundment sludges." 60 Fed. Reg. 43656. But EPA states plainly and candidly in the preamble that creating a regulatory system to address such releases is low among the Agency's priorities when measured against the appropriate standard of whether new rules are necessary to protect human health and the environment. *Id.* The absence of a judicial mandate to engage in Option 2 or Option 3 rulemaking, the Agency's correct assessment that it should devote its resources to higher priority matters, and the failure of the NRDC Petitioners to support their position with data in the record, which we discuss below, together compel EPA to go no further than end-of-pipe- equivalence. Because the CWM Court did not compel the Agency to address leaks, sludges, or air emissions (save those from ignitable wastes) resulting from CWA surface impoundment treatment, the Agency may proceed, if at all, only if the facts and policy considerations warrant creating a substantial new regulatory program. Because it is under no judicial mandate to adopt any such new rules, EPA ought to consider the proponents of such new rules to be petitioners for rulemaking under 40 C.F.R. Part 260, Subpart C. That Subpart, which addresses rulemaking petitions, places on the petitioner the burden of coming forward with "the need and justification for the proposed action, including any supporting tests, studies, or other information." 40 C.F.R. § 260.20(b)(4). Other portions of this rule address specific types of rulemaking petitions and make clear that the burden of proof to support the petition is on the petitioner. For example, petitions for equivalent test procedures "must demonstrate to the satisfaction of the Administrator that the proposed method

is equal to or superior to . . ." the established method. Id.

at 260.21(a). Petitioners who want to add additional materials to the Universal Waste Rule or obtain variances from classification as a solid waste, must discharge similar burdens. Id. at §§ 260.23, 260.30. Delisting petitions are the "flip-side" of Options 2 and 3, because delisted wastes are not covered by the LDRs. Delisting petitioners "must demonstrate to the satisfaction of the Administrator that the waste produced does not meet any of [certain] criteria . . ." Id. at § 260.22. Measured against these standards, the NRDC Petitioners have not come forward with a credible, factual basis for creating a broad new LDR regime, let alone carried their burden of proof. The only support offered by NRDC Petitioners is a March 4, 1993 rulemaking comment submitted by the Hazardous Waste Treatment Council, now the Environmental Technology Council ("ETC"). That document consists largely of legal arguments (which we refute above) and contains not one bit of data, not one bit of research to support the proposition that releases from CWA surface impoundment treatment present any risk to human health or the environment, let alone risks that would warrant discretionary rulemaking by the Agency to create what amounts to a "mini-Subtitle C" regulatory program for non-hazardous Subtitle D surface impoundments. The Agency would surely reject a request for such sweeping new rules had it been presented as a petition for rulemaking under § 260.20, because it lacks any factual foundation. AF&PA believes that ETC's position ought to be rejected in the present context as well. Neither EPA nor the manufacturing community has the resources to address low priority, low risk issues supported only by mere assertions of a litigant, which would result in rules that do not advance in any significant way protection of human health and the environment. Thus, EPA should reject Options 2 and 3.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT EPA Correctly Decided That "Bare Releases" Do Not Trigger LDR

Requirements. AF&PA shows above that no Phase IV rules are required by the CWM decision. But if EPA believes that it must under the settlement agreement at least examine whether it should pursue LDR requirements beyond those proposed in the Phase III rule, then a risk-based approach makes sense. EPA has correctly observed that the CWM Court "intended to allow continued use of treatment surface impoundments to treat decharacterized wastes, provided the extent of treatment is equivalent to usual RCRA treatment." 60 Fed. Reg. 43656. EPA addressed this requirement, which it named "end-of-pipe-equivalence," in the Phase III Rules. In the Phase IV preamble, EPA confronts the issue of whether the judicially decreed accommodation of CWA treatment facilities, which is embodied in EPA's Phase III Rules, is somehow undercut by the assertion that underlying hazardous constituents leak from CWA surface impoundments, partition to sludges generated in those impoundments, or volatilize during CWA treatment. (We say "assertions" because the proponents of additional LDR regulation have not submitted any data supporting these claims.) The question is whether if such releases occur in fact, is that alone sufficient to invalidate the Agency's Phase III determination that CWA treatment comprises RCRA equivalent treatment? EPA is correct when it concludes that "something more than the bare release of a hazardous constituent is needed to trigger this invalidation." 60 Fed. Reg. 43656. First, EPA's conclusion recognizes that "no treatment unit is absolutely release-free (there are certainly releases of hazardous constituents from combustion units, for example)" 60 Fed. Reg. 43657. Second, the Agency correctly analyzed the CWM decision when it observed that "the Court did not explicitly state that its equivalence test, or any other part of the opinion, necessitated control of all hazardous constituent releases from surface impoundments." 60 Fed. Reg. 43656. EPA concludes based on these observations that EPA's focus should not be confined to whether a bare release has occurred because "the more fruitful inquiry is the extent of the release." 60 Fed. Reg. 43657. AF&PA agrees that "under this reading [of the CWM decision], the Agency could evaluate whether the risk from

the various types of releases is great enough to warrant control." Id. AF&PA also supports EPA's observation that a finding that there is insufficient risk would mean that the impoundment is not engaging in a type of cross-media transfer of untreated hazardous constituents that invalidates its treatment function, and therefore that decharacterized wastes can be treated in the impoundment to effect the necessary accommodation between RCRA and the CWA. Id. Any other reading of the CWM decision would result in complete disruption of long-established CWA treatment processes, would surely disrupt existing EPA Office of Water regulatory programs, and would undercut in-process integrated rulemaking activities for the pulp and paper industry as well as others. Such a "draconian reading," as the Agency put it in the preamble, would also result in treatment for its own sake rather than to affect protection of human health and the environment, contrary to the teaching of *Hazardous Waste Treatment Council v. EPA*, 30 ERC 1233 at 1239 (1989) ("HWTC III"). In that case the D.C. Circuit observed that EPA is [not] free, under § 3004(m), to require generators to treat their wastes beyond the point at which there is no 'threat' to human health or the environment. That Congress's concern in adopting § 3004(m) was with health and the environment would necessarily make it unreasonable for EPA to promulgate treatment standards wholly without regard to whether there might be a threat to man or nature. HWTC III at 1239. The D.C. Circuit confirmed this conclusion in CWM where it stated that, "treatment might be unreasonable . . . if the EPA required treatment of waste that 'posed no threat to human health or the environment.'" CWM at 14. Thus, EPA is correct when it concluded that a bare release is not enough to trigger LDR requirements. If a release does not pose a significant threat to human health and the environment then no additional LDR requirements are necessary.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final

rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT EPA Has Twice Delayed The Effective Date Of Subpart CC So That

It Can Reassess Fundamental Elements Of That Rule Including The Underlying Test Method. EPA Should Not, Therefore, Base The Phase IV Air Emission Risk Assessment Or Control Measures On The Subpart CC Rules. EPA's Phase IV risk assessment concerning air emissions, "relied on existing analyses conducted to support the RCRA Subpart CC regulation of air emissions from hazardous wastewater treatment units." RIA at 2-51. These include, presumably, the regulatory impact analysis for Subpart CC and the Background Information Document ("BID"). But the Subpart CC rules are presently undergoing both EPA administrative review and judicial review in large part because of flaws in EPA's risk assessment and BID which underlie the Subpart CC 100 ppmw regulatory threshold, Test Method 25D, and other issues affecting the applicability of the Subpart CC rules. Because of these outstanding issues, the Agency has twice postponed the effective date of the Subpart CC rules. 60 Fed. Reg. 26828 (May 19, 1995), 60 Fed. Reg. 56952 (Nov. 13, 1995). In addition, EPA published on August 14, 1995 a proposed rule and notice of data availability concerning changes to fundamental aspects of the Subpart CC rule including waste determination procedures and the applicability of the rule to units that operate air emission controls under the Clean Air Act ("CAA"). 60 Fed. Reg. 41870. In that Federal Register notice, EPA announced that it "is planning to publish a technical correction notice to the rule . . . and may also propose additional changes to the rule in the near future." Id. In view of EPA's on-going administrative review process, the related judicial review of the Subpart CC rules, and fundamental flaws in the underlying risk assessment and test methodology -- which we discuss below -- EPA should not base any Phase IV Rule decisions on the Subpart CC rule or its underlying analyses. Test Method 25D Produces Artifact VOCs That Bias Test Results. EPA's Phase IV preamble discussion of Option 2 controls for air emissions states that substantive portions of Subpart CC would be "borrowed from that Rule" including "waste determination procedures" that use Method 25D to determine whether the 100 ppmw regulatory level is triggered. 60 Fed. Reg. 43663. AF&PA told EPA in its Subpart CC comments, and in communications with the Agency in connection with its ongoing

administrative review, that Method 25D is seriously flawed because, in essence, it creates VOCs where none otherwise exist. We summarize these comments below. Method 25D employs polyethylene glycol ("PEG") as a matrix for collecting waste samples for analysis. The PEG must, however, be "cleaned up" before use in an actual test procedure to remove organic compounds that may be detected as volatile organics by the test method. Method 25D § 3.1.1, 40 C.F.R. Part 60, App. A. The cleanup procedure involves heating the PEG to 120° C and purging it with nitrogen. *Id.* NCASI informed EPA (in comments on proposed Method 25D) that PEG thermally degrades during this cleanup process into volatile organic compounds, which are purged at low pH conditions. These VOC artifacts create false positive results that can exceed the 100 ppmw regulatory threshold. NCASI submitted experimental data to EPA, set out below, which demonstrate this effect. EFFECT OF PEG TREATMENT

TEMPERATURE ON BLANK RESPONSE [NOT REPRODUCED HERE] In the final Subpart CC rule, EPA responded to NCASI's comment by lowering the PEG cleanup temperature from 200° C (as proposed) to 120° C. This does not, however, resolve the problem. The above data show that significant levels of volatile organics were found in PEG even when cleaned up at 125° C and 75° C. Extrapolating from these data to a cleanup temperature of 120° C, a sample containing no volatile organics with a pH of 2 would have a measured Method 25D response of 126 ppm. This is well above the regulatory threshold of 100 ppm, even after subtracting the maximum allowed 10 ppm blank level. In other words, using the final Method 25D, a laboratory blank would exceed the final 100 ppmw regulatory threshold even before volatile organic levels in a waste sample (if any) are considered. NCASI experimented with several alternative means of remedying this problem and found that the best approach to correct the bias in Method 25D is to incorporate each of the following points into a revised Method 25D: lower the treatment temperature of PEG to room temperature and increase the purge volume to reach the desired level of VOC removal (48 hours in the case of NCASI's experiments); . perform the blank analysis at a pH similar to that of the sample adjusting for both pH and buffer capacity; and allow larger blank levels to be subtracted if the variability of the blank can be shown to be less than 10 ppm VOC. Reducing the cleanup temperature will minimize the PEG artifact response, analyzing the blank at the sample pH will measure the artifact response, and subtracting the blank value will correct for the artifact response. Although the blank response for PEG prepared at room temperature was found to be greater than 10 ppm (Method 25D presently limits blank subtraction to 10 ppm or less), NCASI found that blank levels have been very consistent. Therefore, subtracting a blank level higher than 10 ppm (39 ± 2 ppm in NCASI's pH 2 example) would not adversely affect the accuracy or precision of the revised method. Given the flaws in Method 25D, which we understand EPA is now addressing in the context of its administrative review, it is not appropriate to incorporate this test method into any possible Phase IV controls. Method 25D Overstates The Organic Volatilization Potential Of Waste Material. Volatility of organic compounds is generally a function of temperature. As the temperature of a waste sample is increased, so does the amount of organics that are driven off. Method 25D requires that waste samples be heated to 75° C

and purged with nitrogen. AF&PA commented to EPA during the

Subpart CC rulemaking that the extremely high heat required by the test protocol does not simulate the conditions used by the Agency to estimate risks from VOC emissions. Consequently, the test method results in regulatory control of wastestreams that would not otherwise contribute to the risks that the rule seeks to reduce. In other words, Method 25D exaggerates the amount of volatile organics in particular wastestreams and results in unnecessary regulation of them when, in fact, these wastestreams would not pose a risk from volatilization of organic compounds under ambient and waste unit operating temperatures. In support of this comment, AF&PA reminded EPA that the Agency used an ambient temperature of 25° C in mathematical models used to estimate nationwide air emissions and the degree of emission control afforded by different control technologies. AF&PA Comments at 7; BID, App. C, p. C-28. EPA also used ambient temperatures in models used to estimate maximum individual cancer risk and air toxics emissions from treatment, storage and disposal facilities ("TSDF"), which the Agency acknowledged are sensitive to temperatures at the TSDF site. 56 Fed. Reg. 33513; BID, App. J, pp. J-9 to J-10. EPA did not, in the final rule, reduce the purge temperature to ambient conditions to bring it into line with the temperature used in its emissions and risk modeling work. EPA explained in the BID that Method 25D was intended to provide only a relative measure of organic emission potential of a waste, rather than measure actual emissions from a waste at an operating facility. Thus, EPA reasoned, it need not use realistic temperatures in the test method. BID at 8-5. But the Agency never explained in any readily discernable fashion how Method 25D distinguishes wastes which contributed to EPA's estimates of risk from those wastes which do not create the risks EPA sought to avoid. In other words, neither the preamble to the final rule, nor the BID presented a rational connection between wastestreams that would be controlled by application of Method 25D and the Agency's emission and risk estimates, which were based on mathematical models that used ambient temperatures.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when

generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENTER American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT EPA's Phase IV Risk Calculations Show That There Are No Significant Risks Associated With Air Emissions From Pulp and Paper Facilities. EPA established a 100 ppmw significant risk threshold for VOC emissions from surface impoundments. 60 Fed. Reg. 43663. The Agency calculated in the Phase IV RIA that VOC surface impoundment concentrations below this threshold would result in 0.000824 cancer cases per facility annually. RIA 2-51. But EPA also calculated that VOC concentrations ranging from 100 to 500 ppmw would produce essentially the same low risk results of 0.000828. RIA Exhibit 2-20 at 2-51. Consequently, EPA's conclusion that VOC concentrations in surface impoundments above 100 ppmw pose a significant risk that warrants consideration of control measures is incorrect. This flaw is compounded by the Agency's admission that these population risk estimates are based on emissions from both tanks (which are not affected by the Phase IV proposed rules) and surface impoundments. RIA 2-51, note 34. In fact, 80% of the VOC concentration data points used by EPA for this risk estimate were from tanks, not surface impoundments. *Id.* Thus, EPA's Phase IV risk assessment results exaggerate the annual population risk for VOC concentrations by including in those estimates treatment units that are not covered by the Phase IV rules. In fact, the risks from VOC emissions from paper industry surface impoundments are so small that EPA's RIA predicted that imposition of Option 2 control measures would not further reduce the risk. EPA estimated the potential risk reduction for air emissions if Subpart CC controls are imposed on decharacterized wastewaters with VOC concentrations in excess of 100 ppmw. RIA at 2-75. In the baseline case (i.e., no additional controls), EPA estimated a 0.1 baseline annual population risk (cancer cases) for all 565 facilities in the pulp and paper industry. Exhibit 2-28, RIA at 2-73. EPA estimated that the post-regulatory annual population risk is also 0.1; the same risk estimated for no additional control measures. Thus, according to EPA's RIA, there is no benefit to imposing Subpart CC air emission controls on pulp and paper industry surface impoundments. In other words, paper industry surface impoundments already evidence "minimized threat" results for VOC

emissions and therefore meet RCRA § 3004(m) requirements. EPA

should, therefore, reject Phase IV air emission controls for pulp and paper industry facilities.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT EPA Has Correctly Rejected Option 3. Under Option 3, decharacterized wastes would have to be treated to meet UTS before they enter into CWA surface impoundments. 60 Fed. Reg. 43655, 43675. AF&PA is gratified to learn that "EPA is not in favor of the third option, as it is likely to disrupt treatment needed for compliance with the CWA limitations and standards, and impose high costs without targeting risks adequately." 60 Fed. Reg. 43655. EPA is entirely correct that Option 3 would disrupt CWA treatment without environmental benefit because it would ignore useful treatment that occurs in paper industry surface impoundments and "force[] modifications at facilities that do, as well as those that do not, pose risks from leaks, air emissions, and sludges." 60 Fed. Reg. 43659. Moreover, Option 3 would render RCRA § 1006(b) a nullity because it would destroy the integration of RCRA and other acts administered by EPA as the Congress commanded. See CWM at 20, 22-23. Finally, it would ignore the CWM Court's finding that "under RCRA diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments that are part of an integrated CWA treatment train . . . before they have been treated pursuant to RCRA" 976 F.2d 2 at 22. For each of these reasons, EPA has correctly rejected Option 3.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P044

COMMENTS American Forest & Paper Association

RESPONDER SS

SUBJECT EQUV

COMMENT Option 2 Issues. AF&PA has urged in these comments that EPA adopt Option 1 (i.e., end-of-pipe-equivalence satisfies § 3004(m)) and reject Options 2 and 3. We offer the following comments, however, about several facets of Option 2 for the sake of completeness. The Proposed De Minimis Exception For Decharacterized Wastewater Does Not Afford Significant Relief To Industries That Practice Water Conservation. Existing LDR regulations have for some time incorporated a de minimis exception for certain low risk/low quantity wastestreams. See e.g., 40 C.F.R. § 268.1(e)(4) (losses to wastewater treatment systems of certain commercial chemical products) and (e)(5) (laboratory wastes). EPA proposed in its Phase III rules a similar exception for material handling losses, leaks, discharges from safety showers, rinsate from empty containers and for characteristic wastes injected into Class 1 non-hazardous wells. In its comments on the Phase III rules, AF&PA urged EPA to extend the de minimis exception to decharacterized wastestreams that are managed in CWA surface impoundments. Although AF&PA is gratified to see that EPA has proposed a de minimis exception in § 268.1(e)(4)(ii), 60 Fed. Reg. 43691, the 1% flow limit precludes significant relief to industries like ours that practice aggressive water conservation. In 1989, NCASI surveyed its membership to obtain information on wastewater and solid waste management practices, including information on water conservation and reduction in wastewater flow to treatment works. The survey data show that during the period 1975 to 1988, paper mills reduced water use by 27-34%. Even in the short 3-year period from 1985 to 1988, water use was reduced by 7-9%. Significantly, in 1988, it took 70% less water to make a ton of paper than in 1959. NCASI Technical Bulletin No. 603 at 3 (February, 1991) (Technical Bulletin No. 603 is attached as Appendix G). As a result of these aggressive water conservation efforts, wastewater flow to treatment works was reduced by approximately the same magnitude. Between 1985 and 1988, untreated wastewater flows were reduced by approximately 8%. The paper industry reduced wastewater flows by 26-29% during the period 1975 to 1988. *Id.* The end result of the 1% flow limit is to penalize industries that practice water conservation relative to those industries that do

not conserve water. AF&PA believes that EPA did not intend this result. AF&PA would like to meet with EPA to develop a de minimis exception for decharacterized wastewater that affords water conserving industries meaningful relief while protecting human health and the environment. EPA Should Exclude Pre-Biological Sludges From Option 2 Regulation Because Both The Central-Tendency And High-End Risk Assessment Results Show No Significant Risk From This Source For The Pulp And Paper Industry. EPA proposed to exclude from Option 2 controls certain low risk situations including "sludges and leaks from biotreatment and post-biotreatment units . . . due to the lower risks posed by these units." 60 Fed. Reg. 43660. AF&PA agrees that this exclusion is supported by the Agency's risk assessment coupled with the aggressive biological and post-biological treatment that occurs in pulp and paper industry surface impoundments. In addition, this exclusion conforms with the CWM decision, which found that "under RCRA diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments that are part of an integrated CWA treatment train . . . before they have been treated pursuant to RCRA" 976 F.2d 2 at 22 (emphasis added). EPA's conclusion is further confirmed by the NCASI risk assessment based on new data taken from NCASI's 10-mill study and waste characterization database. For the same reasons, AF&PA urges EPA to exclude pre-biological sludges from Option 2 control requirements. EPA's risk assessment for sludges from the pulp and paper industry show that for both the central-tendency and high-risk scenarios significant health risks do not occur. According to EPA's RIA, "in the . . . pulp and paper . . . industr[y], there are no [sludge] samples expected to pose individual lifetime cancer risks in excess of 10⁻⁵ or RfD exceedences" for the central-tendency risk assessment. RIA at 2-66. Significantly, even for the high-risk scenario using the conservative DAF of 12, EPA concluded that "in the . . . pulp and paper industr[y] there are no significant individual lifetime cancer risks and no RfD exceedences." *Id.* For these reasons, EPA should exclude paper industry sludges from Option 2 controls. EPA Correctly Avoids Regulatory Duplication By Deferring To Other Federal Rules That Will Protect Human Health And The Environment Such As The Proposed MACT Requirements For The Pulp And Paper Industry. EPA stated in the Phase IV preamble that "to avoid duplication with other requirements, EPA would defer to other federal rules which establish controls addressing the same situations." 60

Fed. Reg. 43660. EPA is correct to do so for at least two reasons. First, RCRA § 1006(b)(1) requires that the Administrator "shall integrate all provisions of [RCRA] for purposes of administration and enforcement and shall avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act" 42 U.S.C. § 6905(b)(1). Second, EPA recognizes that certain "inefficiencies and confusion could occur if Option 2 controls were applied and soon superseded by upcoming Clean Air Act ("CAA") standards" as in the case of the pending MACT standards for the pulp and paper industry. *Id.* It would make no sense for EPA to impose LDR air emissions standards that are possibly inconsistent with those now being considered by EPA's Office for Air and Radiation. Thus, EPA's proposal to defer to such rules honors both its statutory requirements and the concept of practical regulation. AF&PA understands from the Phase IV preamble that EPA intends to defer completely to the proposed MACT standards for the pulp and paper industry. The Agency stated that In the case of air emissions, EPA would defer to standards regulating total volatile organics, as adequately covering air emissions of UHCs from this type of treatment. In addition to existing regulations, there are some CAA air emission limits under development. Inefficiencies and confusion would occur if Option 2 controls were applied and soon superseded by upcoming CAA standards. Facilities subject to CAA standards for hazardous air pollutants (in particular, those promulgated pursuant to CAA § 112) in the near future thus would not be covered by Option 2 air emission controls. 60 Fed. Reg. 43660. But the RIA suggests that EPA is at least considering giving less than full credit to the MACT standards, because implementation of MACT control technologies may not lower concentrations of VOCs to below the 100 ppm limit being considered for Phase IV Option 2 purposes. RIA ES-5, 2-52. AF&PA urges EPA to give full credit to the MACT standards for the following reasons. First, as we show above, EPA's risk calculations demonstrate that there is no difference in calculated risk between surface impoundments that exhibit VOC concentrations below 100 ppmw (the no significant risk level) and those that exhibit VOC concentrations up to 500 ppmw. RIA Exhibit 2-20 at P-51. The proposed MACT control trigger level is 500 ppmw for process wastewater. 58 Fed. Reg. 66145 and proposed 40 C.F.R. § 63.446, 58 Fed. Reg. 66177 (Dec. 17, 1993). Thus, the 500 ppmw trigger level for paper industry MACT

wastewater controls achieves the same level of risk reduction as EPA's 100 ppmw control threshold for the Subpart CC rules, which EPA may adopt under Option 2. Moreover, MACT technology is essentially the analog of LDR Best Demonstrated Available Technology ("BDAT"). Under § 112 of the CAA, EPA sets MACT standards that are "no less stringent than 'the average emission limitation achieved by the best performing 12 percent of the existing sources' or 'the average emission limitation achieved by the best performing five sources'" depending on how many facilities there are in a given subcategory. 58 Fed. Reg. 66136. This formulation of the MACT standard is essentially the same as RCRA BDAT, which EPA describes as follows: A treatment technology is considered to be 'demonstrated' primarily based on data from full-scale treatment operations that are currently being used to treat the waste Once the 'demonstrated' technologies have been identified, the Agency determines whether these technologies may be considered 'available'. To be 'available' the technology . . . must be able to be purchased and the technology must substantially diminish the toxicity of the waste or reduce the likelihood of migration from the waste's hazardous constituents. 54 Fed. Reg. 48380-81 (Nov. 22, 1989). Selection of MACT technology from the "best performing" mills more than meets the BDAT definition. In point of fact, EPA's Office of Air concluded that MACT technology would reduce hazardous air pollutant ("HAP") emissions from pulping by 98% and will reduce by 99% HAP emissions from bleaching operations. 58 Fed. Reg. 66145 (Dec. 17, 1993). This more than meets the BDAT criterion that "the technology must substantially diminish the toxicity of the waste" Significantly, EPA's Office of Air concluded that "because most of the HAP from pulping component and process wastewater emissions is also VOC, the reduction efficiency for total HAP was determined to be the same as that for VOC." *Id.* Given the essential equivalence of the MACT and BDAT selection criteria and given the 98% or 99% VOC reduction represented by the paper industry MACT 500 ppmw threshold, EPA should have no reservations about deferring fully to the MACT standard. EPA should defer possible Phase IV controls to the pulp and paper industry MACT standards for another reason. Methanol is the principal organic constituent of pulp and paper industry wastewaters. 58 Fed. Reg. 66087 (Dec. 17, 1993) ("The majority of all HAP emissions from the pulping and process wastewater components are methanol") and Table 1, above. Methanol is not a volatile material and is

almost completely removed from paper industry wastewater by aggressive biological treatment. In the NCASI Biotreatability Report attached as Appendix B, researcher Douglas A. Barton investigated the biotreatability of methanol, among other organic constituents, and concluded that biological treatment in paper industry surface impoundments removes more than 99% of methanol present. Significantly, less than 0.1% of the methanol is removed via air stripping or adsorption. Thus almost 100% of methanol removal is attributable to legitimate treatment. NCASI Report, Table 5 at 7 (Appendix B). But the Subpart CC Test Method 25D does not discriminate among VOCs, nor does the Subpart CC 100 ppmw control trigger level. As we show above in our discussion of Method 25D, the artificially high test temperature of 70° C will "drive-off" organic compounds that are not volatile under real world conditions. Thus, EPA's Phase IV Option 2 control measures may be triggered if, as EPA discusses, Subpart CC applicability standards and test procedures are incorporated, even though the principal organic constituent of paper industry wastewater is not volatile. Complete deferral to the paper industry MACT rule would avoid unnecessary Option 2 controls of a non-volatile material. In the MACT rule, EPA's Office of Air used methanol as a surrogate for HAPs when the Agency developed and selected MACT treatment options. 58 Fed. Reg. 66149 (Dec. 17, 1993). It was, therefore, largely with respect to methanol that EPA's Office of Air concluded that MACT control requirements would reduce emissions from process wastewater by 98%. 58 Fed. Reg. 66145 (Dec. 17, 1993). It is hard to imagine that RCRA § 3004(m)'s "minimized threat" language would require anything more. Consequently, EPA should defer possible Option 2 air emission controls completely to the proposed MACT standards for the pulp and paper industry.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore,

the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P046
COMMENTS National Mining Association
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 046
COMMENT

As the agency examines the issue of surface impoundments that manage decharacterized wastes, EPA must remember that Congress has not mandated the imposition of RCRA controls on such impoundments to control sludges, leaks and air emissions. Neither does the decision in *Chemical Waste Management v. EPA* ("Chem Waste II"), 976 F.2d 2, cert. den. S. Ct. 1991, (1992) require EPA to regulate, under RCRA, sludges, leaks and air emissions from surface impoundments managing decharacterized wastes. Furthermore, not only are RCRA regulations not required, they are not necessary in the mining and mineral processing industry to control potential risks from sludges, leaks or air emissions from surface impoundments managing decharacterized wastes. In fact, the Chem Waste II decision supports the adoption of the proposed rule's Option I, i.e., the existing panoply of federal and state requirements adequately address surface impoundments managing decharacterized wastes. To impose either of the proposal's other two regulatory options would be regulatory overkill, unduly disruptive of the existing Clean Water Act treatment systems, thus effectively invalidating those systems.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P048
COMMENTS Chemical Waste Management
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 048
COMMENT

In light of the President's Common Sense Initiative CWM believes that option 1 is the most practical approach of the three options proposed. CWM does not see the benefit of adding another layer of regulatory requirements on top of existing regulations which address Subtitle D surface impoundments when they exist at RCRA permitted or interim status facilities. Since 42% of these Subtitle D surface impoundments exist at TSDFs which have monitoring and release regulations, (See 60 Fed. Reg. at 43,659) it appears to CWM that if cross-media releases occur from these unpermitted impoundments that they can be addressed by the Agency under the authority of RCRA § 3004(u) or § 3008(h). CWM believes that this option provides adequate protection and thus should be finalized by the Agency.

B. Option 2

Option 2 would require the development of controls that focus on situations posing excessive risk. This option would exclude controls from the following: 1) wastewaters that do not have hazardous constituents above the UTS at the point of generation, and 2) wastewaters with de minimis amounts of hazardous constituents, as defined in the Phase III rule with regard to discharges to UIC wells. This option proposes to defer controls for air emissions from Subtitle D surface impoundments receiving decharacterized wastes to Subpart CC type controls. It would also apply existing 40 CFR 258 Subpart E groundwater requirements for the control of leaks at these surface impoundments. This option also recognized that if a Subtitle D impoundment that receives decharacterized waste streams is located at a permitted TSDF that no further control under this proposal are necessary.

As noted earlier CWM supports Option 1; however, if Option 2 is promulgated CWM supports the subset of this option that recognizes that Subtitle D surface impoundments receiving decharacterized waste streams located at a permitted TSDF are not subject to further control. In addition, CWM believes that it is important for the Agency to indicate that interim status facilities with these types of surface impoundments are also not subject to further control. This was indicated by the Agency in the discussion of option 1. (See 60 Fed. Reg. at 43,659). This is because the

interim status facilities are subject to cleanup under RCRA § 3004(h), which provides the Agency the authority to compel corrective action.

In conjunction with the comment the Agency must amend the flowchart "Figure 1: Option2-General Applicability Criteria and Compliance Alternatives for Surface Impoundments accepting Decharacterized Wastes" (See 60 Fed. Reg. at 43,662) to reflect that interim status facilities are subject to the same requirements as permitted facilities. Specifically, CWM recommends that the bottom left decision box on the flowchart should be amended as follows:

"Is the Surface Impoundment Located at a RCRA Subtitle C Permitted or Interim Status TSDF."

With regard to air emission controls discussed under Option 2 CWM does not support subjecting surface impoundments receiving decharacterized wastes at non-permitted or interim status facilities to air emission controls similar to those issued under Subpart CC because Subpart CC applies to hazardous wastes placed in tanks, containers, or impoundments. CWM believes that air emissions from these impoundments are most appropriately addressed under the Clean Air Act.

C. Option 3

Option 3, which the Agency states it does not support, would require that Decharacterized Wastes be treated (not merely diluted) to meet Universal Treatment Standards (UTS), which includes applicable underlying hazardous constituents (UHCs), prior to entry into Subtitle D surface impoundments.

CWM believes that this option is identical to the Phase 111 proposed rule {60 Fed. Reg. at 11,702; March 2, 1995} for discharges to nonhazardous surface impoundments. CWM is in agreement with the Agency's opinion that this option would be to disruptive to the industry. CWM believes that the net benefit of requiring such treatment far outweighs the high costs associated with such a requirement.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P049
COMMENTS Molten Metal Technology
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 049
COMMENT

According to the proposal, "[t]he central legal and policy issue... is if and when releases of hazardous constituents from surface impoundments which are part of a treatment train for decharacterized wastes are so extensive as to effectively invalidate the treatment process as a means of LDR compliance." 60 Fed. Reg. At 43656, col. 2. EPA is evaluating at least three options for addressing this issue. MMT has no position on which, if any, of the options under consideration should ultimately be adopted. However, MMT is concerned that EPA is considering allowing substantial cross-media transfer of hazardous constituents and relying on "after-the-fact" remedial authorities (e.g., RCRA Corrective Action) to address resulting threats to human health and the environment. See, e.g., 60 Fed. Reg. At 43659, col. 3 and at 43661, col.1.

RCRA provides that EPA must establish treatment standards under the LDR program. These standards are defined as "those levels or methods of treatment, if any, which substantially diminish the toxicity of [a] waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." RCRA § 3004(m)(1). Furthermore, EPA is authorized to allow land disposal of hazardous wastes only if such disposal is deemed "protective of human health and the environment," meaning that "there will be no migration of hazardous constituents from the disposal ... for as long as the wastes remain hazardous." Id. § 3004(d)(1),(e)(1),(g)(5).

These legislative provisions establish a very high standard for allowing land disposal, and EPA has recognized this standard in its regulations. For example, prohibited wastes may not be treated in surface impoundments if evaporation is the principal means of treatment. 40 C.F.R. § 268.4(b). According to EPA, "evaporation ...do[es] nothing to remove, destroy, or immobilize contaminants as contemplated by RCRA [T]he objectives of section 3004(m) [are to] reduce levels of toxicity or reduce the potential for hazardous constituents to migrate from the waste. Practices which do nothing more than transfer constituents to other media fail to satisfy this objective." 52 Fed. Reg. 25760, 25779 (July 8, 1987) (emphasis

added).

MMT agrees wholeheartedly with EPA's oft-stated position that cross-media transfer of hazardous constituents is an unacceptable means of achieving LDR standards. Thus, we urge The Agency to very carefully consider the issue of cross-media transfer of hazardous constituents for surface impoundments, and limit the allowable releases appropriately. In particular, we question whether any option that relies on RCRA Corrective Action or other remedial programs can possibly meet the statutory requirement that selected treatment methods minimize threats to human health and the environment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P053
COMMENTS Commenter Texaco
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 053
COMMENT

In both the Phase III and Phase IV proposed rules, EPA acknowledges that the risks addressed by these proposals are relatively low. Instead, EPA bases their rationale for regulation on the requirements of the holding in *Chemical Waste Management, Inc. v. EPA*, 976 F.2d 2(D.C. Cir1992); cert. den 113 U.S. 1961 (1983). However, the case holding does not require such regulation on surface impoundments. EPA should not read into this case such overly broad requirements. Therefore, EPA should adopt Option I in the proposal -- no further regulation of non-hazardous surface impoundments. Also, storm water impoundments that receive process water during storm events should be exempt from Phase III and Phase IV proposed rules.

II. EPA should adopt Option I, No Further Requirements for Non Hazardous Surface impoundments

Texaco strongly urges EPA to adopt Option I of the proposed rule as the risks posed by non-hazardous Clean Water Act (CWA) surface impoundments do not warrant any additional regulations. EPA has already recognized that any risks would be low. As a result of the Toxicity Characteristic rule and the Primary and Secondary Sludge Listings, any potential risks associated with sludges and leaks from petroleum industry nonhazardous CWA surface impoundments are already minimized. In addition, any potential risk from air emissions are minimized as a result of CAA Benzene Waste NESHAP and Petroleum Refinery MACT applicable to wastewaters managed by the petroleum refining industry. Therefore, any additional RCRA regulatory requirements which may be imposed by this proposed rule would be unnecessary as well as overlapping those requirements to which our refinery wastewater treatment systems are already subject. Additional RCRA requirements would not significantly lower any risk while the costs to implement would be substantial.

III. If Option II Is Adopted, EPA Should Implement the Following Modifications

If EPA should decide to regulate non-hazardous surface impoundments under this proposed rule, EPA should-adopt Option II, in consideration of the following comments:

Texaco supports EPA's proposal to exclude from regulation, sludges

and leaks from biotreatment and post-biotreatment surface impoundments as supported by our comments in section II. EPA should clarify that this includes an exclusion from any groundwater monitoring requirements.

Texaco supports EPA's position that facilities regulated under CAA regulations will automatically fulfill any Phase IV air emission obligations. However, EPA should clarify that CWA surface impoundments which are already subject to regulation under the Benzene Waste NESHAP, NSPS, Petroleum Refinery MACT or Hazardous Organic NESHAP MACT (including compliance with bubbling, de minimis thresholds, or technology standards) would be excluded from Phase IV air emission control requirements. This should be specified as an exemption from and not a fulfillment of Phase IV air emission obligations to avoid any unnecessary duplicate monitoring and record-keeping which may be interpreted as being required.

IV. EPA Should Not Adopt Option III

Texaco supports EPA's conclusion that Option III is not appropriate. Subjecting non-hazardous surface impoundments to RCRA Minimum Technology Requirements would result in a significant and unnecessary regulatory burden to Texaco's operations. Substantial costs would be incurred in retrofitting, costing millions of dollars, with no commensurate environmental benefits.

EPA should exempt wet weather flow impoundments from regulation under the Phase III and Phase IV LDS. As the EPA appropriately concluded during the primary and secondary sludge listing determination, RCRA regulation of surface impoundments that receive small quantities of process water along with storm water during storm events is unnecessary. In addition, subjecting wet weather flow impoundments to the regulatory requirements imposed by the Phase III and Phase IV LDS would represent a significant cost and burden to Texaco's operations with little, if any, environmental benefits.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996,

EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P054
COMMENTS Commenter Total Petroleum
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 054
COMMENT

Total Petroleum, Inc. is an independent refiner and marketer of petroleum products, primarily fuels, in the central United States. This rule will have a direct impact on our refining operations and we appreciate this opportunity to comment on the proposed Phase IV Land Disposal restrictions. It is our belief that Clean Water Act and Safe Drinking Water Act regulated units, such as injection wells, accepting "hazardous wastes" which are rendered non-hazardous by dilution pose only minuscule, negligible risks and should not be regulated further. This is another example of a rule whose costs are extreme and benefits are low. EPA should select Option 1, which requires us additional mandates.

Recent EPA rulemakings have significantly improved the environmental management of all media at refineries. The regulations have in turn reduced the risk to human health and the environment from surface impoundments resulting in negligible risks.

The Toxicity Characteristic (TC) rule promulgated on March 25, 1990 significantly reduces benzene and other hazardous constituents in wastewater.

The Primary Sludge Listing rule promulgated on November 2, 1990 required sludge removal and convert impoundments to non-hazardous service under closure provisions of 40 CFR 265.113.d-e.

The National Emission Standard for Benzene Waste Operations (BWON) promulgated on January 17, 1993, resulted in the segregation and treatment of benzene containing wastewater. In the process complying with the BWON, most other organic constituents such as toluene and xylene were also controlled in the wastewater stripping prior to entering a surface impoundment.

The SOCOMI HON rule, promulgated on February 28, 1994 has reduced hazardous air pollutants from wastewater and other sources at the petrochemical plant.

The RFG rule, promulgated on December 14, 1993, requires refineries to reduce the benzene content in gasoline. This change in gasoline also results in the reduction of emission of benzene at refineries. In addition, the gasoline distribution MACT rule, promulgated on July 28, 1995, reduces the emissions of benzene and other air toxics from the refinery. Both of these

rulemakings have significantly lowered the existing baseline emissions of air toxics from the refinery. The new air toxic emission baseline has been reduced to a level that any additional regulation of air toxics as proposed by EPA in Options 2 and 3 cannot be justified as being cost effective.

The scope of Phase IV rulemaking should not include any additional requirements for surface impoundments or underground injection wells.

Stormwater impoundments are very low risk and additional controls proposed under this rulemaking cannot be justified as being cost-effective.

Treatment impoundments managing non-hazardous wastewaters are recognized in the Third opinion as integral CWA units.

Storm water impoundments are important equalizers that are required to maintain the efficacy of biological treatment systems and ensure that the refinery is in compliance with CWA permits.

Stormwater impoundments also provide surge protection for wastewater treatment plants and thus prevent the rapid flushing of biomass from the wastewater treatment plant. As an integral part of the CWA treatment system, stormwater impoundments should not be regulated as RCRA units.

The management strategy for a stormwater impoundment requires it to be empty whenever possible so that it can receive stormwater.

Therefore, the residence time of Underlying Hazardous Constituents (UHCs) is low and the water driving force (head) is also low.

Further decharacterized process wastewater constitutes only a fraction of the total stormwater and is predominantly non-oily.

These factors limit the possibility of UHCs migrating out of the stormwater impoundment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore,

the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P054
COMMENTS Total Petroleum
RESPONDER SS
SUBJECT EQUV
SUBJNUM 054
COMMENT

Advanced biological treatment (ABT) should be designated as Best Demonstrated Available Technology (BACT) for wastewater and wastewater sludges from refineries and co-located petrochemical plants.

The combination of ABTs and downstream geological impoundments provides long residence times of wastewater in treatment units,, low cost, ease of operation, and a cost effective approach to maintaining compliance with the CWA permits.

ABI is a proven cost effective technology that meets the Universal treatment Standards(UTS) and minimizes analytical difficulties and monitoring burdens.

The CWA permits at refineries and petrochemical plants using ABI are protective of human health and the environment.

RESPONSE:

As explained by the Agency in the preamble to the LDR Phase III final rule, biotreatment systems vary in performance both in general and as to specific constituents. The Agency therefore is reluctant to designate ABT as BDAT. The Agency has data related to the performance of ABT from only 10 facilities. The main reason for establishing ABT as BDAT that was provided by commenters to the Agency, during the development of the final Phase III rulemaking, was the elimination of the compliance monitoring burden. The Agency does not believe that reducing monitoring burden is an adequate justification for creating a new technology-specific treatment standard. However, EPA did decide, in promulgating the LDR Phase III final rule, to reduce the monitoring requirements for decharacterized wastes that are managed in a wastewater treatment system involving ABT. These wastes must be monitored annually to ensure compliance with the treatment standards for underlying hazardous constituents.

DCN PH4P055
COMMENTS American Industrial Health
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 055
COMMENT

For evaluation of risks from transfer of constituents to air, EPA relied on the generic risk estimate for VOCs derived in the Subpart CC risk assessment for air emissions. The Subpart CC Rule is currently under litigation to resolve critical issues including the appropriateness of the 100ppm VOC trigger level. There are substantial concerns about this earlier risk assessment, and EPA should at least consider using chemical-specific emission rates as recommended by Gradient Corporation instead of the generic risk estimate for unidentified VOCs, particularly in light of the fact that there are numerous differences between the makeup of VOCs evaluated in the CC rule and those treated in surface impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P055
COMMENTS American Industrial Health
RESPONDER SS
SUBJECT EQUV
SUBJNUM 055
COMMENT

In general, AIHC supports the Agency's use of a risk-based approach to evaluate chemical releases associated with the treatment and disposal of non-hazardous waste from surface impoundments. However, we have significant concerns with the nature in which a number of technical issues were evaluated, as illustrated in Gradient Corporation's report. Overall, we support Gradient Corporation's technical comments and, in this letter, highlight some of the issues which are of particular importance to AIHC.

The mission of AIHC is to promote the sound use of scientific principles and procedures in public policy for the assessment and regulation of risks associated with human health effects and ecological effects. Although AIHC does not act as an advocate for any product or substance, its generic positions directly affect the scope and impact of individual regulatory decisions.

AIHC is a broad-based association that represents a diverse coalition of companies and trade associations, including manufacturers of consumer products, pharmaceuticals, petroleum, paper, chemicals, motor vehicles, foods and beverages, high technology, and aerospace products. Many of the Council's members currently use impoundments for treatment of non-characteristic wastes. Further, AIHC has a significant interest in the proposed rule due to the reliance upon a risk-based approach to regulatory decision-making. Overall, AIHC is concerned that the development of regulatory options for land disposal as it stands today is not based upon sound science and that the options do not provide sufficient regulatory flexibility to take into account new or site-specific information and data.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P055
COMMENTS American Industrial Health
RESPONDER SS
SUBJECT EQUV
SUBJNUM 055
COMMENT

We commend the Agency for using two different values for the dilution attenuation factor (DAF) in characterizing the risk via the groundwater pathway: one to estimate high-end risks and the other to estimate average risks. However, the Agency has selected a point estimate for a high-end DAF which is greater than the 95th percentile previously identified in the Toxicity Characteristic Rule. The Agency provides no rationale as to why that point estimate was selected rather than the high-end DAF more recently supported by the Agency. In addition to changing the high-end DAF, we urge the Agency to consider a range of values rather than the two point estimates.

RESPONSE:

The commenter's issue regarding the dilution attenuation factor (DAF) used by the Agency in characterizing the risks from releases of decharacterized wastes from surface impoundments to ground water has been rendered moot by subsequent legislation and rulemakings.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P056
COMMENTS Westinghouse
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 056
COMMENT

1. Due to inconsistencies between the preamble language and the regulatory language, it is unclear whether the Phase III and IV LDR proposals apply only to CWA and CWA-equivalent systems that include surface impoundments or to all types of CWA and CWA equivalent systems. We expressed this concern in our comments on the Phase III proposal and it remains with the Phase IV proposal.

2. EPA should take into consideration that the impacts of the proposed Phase III rule could not be considered when reviewing Phase IV, since Phase III has not yet been finalized. Under option 1, EPA would rely solely on existing and future state and Federal regulatory programs, other than the LDR program, to control cross-media transfers of untreated hazardous constituents associated with CWA surface impoundments managing decharacterized wastes. To satisfy the criteria set forth in Chemical Waste Management vs. EPA, that a demonstration be made of equivalent treatment between CWA surface impoundments and conventional RCRA treatment systems, the EPA proposed to rely on a demonstration of compliance with the final end-of-pipe LDR standards. This has a bearing on the selection of option 1 since the end-of pipe LDR standards have not been finalized yet.

The application of 40 CFR Part 264 Subpart CC air emission requirements to surface impoundments in Clean Water Act, Clean Water Act-equivalent, or nonhazardous wastewater treatment systems that accept decharacterized wastes should not be required. The application of these requirements to surface impoundments described in option 2 is not in alignment with the congressional directive which provided the regulatory authority for the development of Subpart CC, nor does it appear to be consistent with the EPA's intention to develop Phase III implementation of this directive as discussed in 56 FR 33490. These statements are based on the following:

The promulgation of 264 and 265 Subpart CC implemented congressional directive in Section 3004(n) of RCRA, which directed EPA to "...promulgate regulations for the monitoring and control of air emissions from hazardous waste treatment, storage, and disposal facilities, including but not limited to open tanks, surface impoundments, and landfills, as may be necessary to protect

human health and the environment." The standards were proposed and ultimately promulgated under Subpart CC of 264 and 265 during Phase II of the EPA effort to implement this statutory directive. The standards established nationwide regulations for the monitoring and control of air emissions from certain waste management units at treatment, storage, and disposal facilities (TSDFs) subject to RCRA subtitle C permitting requirements. Phase II in Subpart CC specifically excludes surface impoundments as described in option 2.

According to 56 FR 33490, the EPA planned to address residual risk after promulgation of the Phase I included in 264 and 265 Subparts AA, BB, and Phase II included in 264 and 265 Subpart CC. The EPA discussed plans to investigate additional cancer risk reduction approaches beyond those considered in selecting the basis of the standards in Subpart CC as part of the third phase of the EPA's program to develop hazardous waste TSDF air emission standards. If it was determined that a need for additional risk reduction was needed, the EPA was to provide additional human health and environmental protection by developing a nationwide standard that would reduce the emission of the specific toxic constituents of concern. The EPA also intended to update and improve the database used for analyzing the human health and environmental impacts resulting from TSDF air emissions. It does not appear the EPA has investigated residual risks nor the need for their reduction. It is not clear this database has been updated as recognized necessary by the EPA in 56 FR 33490. Until these issues are addressed, further application of these air emission standards to waste in surface impoundments should not be promulgated.

Comment #2 It is not clear where in the CFR the air emissions requirements for surface impoundments discussed in option 2 would be placed. It appears the requirements would not be placed in 40CFR 264 and 265 Subpart CC because these types of surface impoundments are specifically excluded. However, it does not seem appropriate to duplicate these requirements in another portion of the CFR because this would lead to inconsistencies when revisions are made to Subpart CC. If option 2 is selected, consideration should be given to expanding the applicability of Subpart CC or simply referencing the requirements of Subpart CC to avoid as many inconsistencies as possible.

Comment #3

A public comment period for the promulgated regulatory language in

264 and 265 Subpart CC recently closed on October 13, 1995. EPA intends to modify and clarify a large portion of the regulatory language included in these subparts. We recommend these modifications be completed before further action is taken to extend these air emission standards to other applications.

Comment #4 If the EPA decides to implement option 2, the proposed regulatory language related to air emission standards should be available for public comment. The regulatory development of Subpart CC has presented several problems, most recently resulting in an opportunity to provide public comments on a rule that has already been promulgated. Comments on the general approach of option 2 are insufficient in providing input to the regulatory language development of these air emission standards.

Comment #5

Several types of waste management units are not applicable to the requirements included in 264 and 265 Subpart CC. These are specified in 264.1080(b) and 265.1080(b). These types of units, as summarized below, should also not be subject to the air emissions requirements discussed in option 2:- units that do not accept waste after the effective date of the final rule- a surface impoundment in which waste is no longer being added except to implement an approved closure plan- a unit used solely for on-site treatment or storage of waste that is generated as the result of implementation of remedial activities

- a unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act
In addition, surface impoundments are exempt from the requirement of 264 and 265 Subpart CC if they are used for biological treatment of waste (264.1085 and 265.1086). This exemption should also be included for surface impoundments described in option 2.

Recommendation A: Clarify the Regulation's Intent to Apply Only to Surface Impoundments and Injection Wells

Clarify the language proposed for codification in 40 CFR 268.39(b) to clearly state that disposal of characteristic wastes only into surface impoundments or injection wells are the prohibited activities (60 FR 11742). The background of this rulemaking as discussed in the preamble distinctly and continuously refers to surface impoundments and injection wells. Further, the emphasis on disposal in surface impoundments contained in LDR III is succinctly referenced in the summary to Phase IV LDR which states that "EPA's recently proposed Phase III LDR rule...addressed

wastewater discharges involving characteristic wastes that are deactivated through dilution and treated in surface impoundments," [60 FR 43655 (emphasis added)]. The Saltstone Processing and

Disposal Facilities operate under both Industrial Wastewater Treatment Facility permit requirements and Industrial Solid Waste Disposal permit requirements. The proposed 268.39(b) provisions can be interpreted to indicate a broader applicability than that intended by EPA, resulting in the Saltstone facilities possibly being construed as a zero discharge facility engaging in Clean Water Act-equivalent treatment. In the Phase IV preamble, EPA is mostly concerned with surface impoundments whose emissions to the air and groundwater are not controlled. The waste treated in the Saltstone facilities are produced during the pretreatment step to treat high level waste by vitrification, which is the specified technology. If process changes were required to comply with this proposed rule, delays to the high level waste treatment program would undoubtedly result, without a commensurate environmental benefit.

Recommendation B: TSD Facilities Are Not Subject to Additional Requirements

The SRS is managed as a RCRA TSDF under a site-wide permit. Under RCRA and its associated regulations, all solid waste management units located at the site are subject to RCRA CORRECTIVE action requirements. These controls have been recognized by EPA as a proposal in option 1 to be sufficient so as to exclude TSDFs from the applicability of certain portions of the phase IV LDR regulations (see 60 FR 43661). If EPA is unable to clarify the proposal as noted in (A) above, then Westinghouse supports the adoption of option 1 including the provision to exclude TSD facilities from certain provisions of the Phase IV LDR rule.

Recommendation C: Defer Management Standards to Existing State Permit Programs

The Saltstone Processing and Disposal Facility operates under both Industrial Wastewater treatment Facility permit and Industrial Solid Waste Disposal Facility permit requirements issued by the SCDHEC. State wastewater treatment operating standards, in this case comparable to the RCRA Subtitle C (Hazardous Waste Management) and Subtitle D (State Solid Waste Plan) requirements, should be considered by the EPA in determining whether acceptable and enforceable controls have been implemented by the state which would satisfactorily minimize short and long term threats to human health and the environment. At Saltstone, such enforceable controls are in place as required under the South Carolina permits. Toxicity Characteristic Leaching Procedure

(TCLP) analyses are mandated periodically to insure that no hazardous waste is placed into the concrete vaults. Equally important, the State requires that groundwater monitoring wells be installed around the disposal vaults. This monitoring is routinely performed to identify potential releases from the vaults. Therefore, based on the State's permit conditions alone, the Saltstone facilities routinely demonstrate compliance with requirements that are equivalent to (although potentially different from) both LDR Phase III and Phase IV management standards. EPA recognizes that compliance with the LDR regulations can be achieved through adoption of groundwater monitoring, detection, and correction mechanisms associated with impoundments. Therefore, facilities such as those at Saltstone which have management standards in place as mandated by other permits or permitting authorities could continue to use impoundments (or CWA-equivalent treatment systems) to manage decharacterized wastewaters (See 60 FR 43666).

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P057
COMMENTS Richard Andersen
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 057
COMMENT

I am writing today both as a geologist and as a concerned Texan. The preamble to the proposed LDR Phase IV rule, vol. 60, No. 162, of the Federal Register, page 43671, seems to relate Clean Water Act surface impoundments in arid areas to the small arid landfills which have special accommodation in the Municipal Solid Waste Subtitle D rules. However, there are major differences which preclude applying the MSW small arid landfill provisions to surface impoundments.

- 1) The arid provision in MSW rules uses the rationale that, because of low rainfall, the landfill won't contain significant quantities of free liquid. However, a surface impoundment normally does contain liquid under a hydraulic head. An arid climate is irrelevant for a surface impoundment.
- 2) The Phase IV preamble spoke of arid regions where ground water is deep, and where a considerable release would occur before contamination would reach ground water. However, some arid areas in Texas have shallow ground water, and even desert springs. Other Texas localities with deep ground water have karst conditions where a leaking surface impoundment could contaminate ground water very quickly. While I support EPA's efforts to allow alternative monitoring where conventional systems will not work well, the rule for surface impoundments should be based on site-specific geohydrology, rather than on a blanket provision for low rainfall areas.
- 3) The MSW small arid landfill provision also is based on transportation, economic, and population density issues which don't apply to surface impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996,

EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P059
COMMENTS Exxon Chemicals Americas
RESPONDER MC
SUBJECT EQUV
SUBJNUM 059
COMMENT

4. De Minimis Exemptions: ECA Recommends Modifications to the De Minimis Exemption Proposed for Wastewaters in CWA Systems

To avoid requiring facilities to develop extensive procedures and implement capital investments that are not warranted by the low risks being addressed by the proposed LDR Phase III and IV rules, EPA should ensure that de minimis provisions are adequately defined. The first step EPA should take is to ensure that the provision on de minimis losses of characteristic wastes to wastewaters which was included in the proposed LDR Phase III rule is maintained (60 FR 11740; 268.1(e)(4)(I)). This provision indicates that these de minimis losses are not subject to any provision of part 268. The provision referenced is for de minimis losses of characteristic wastes to wastewaters that are defined as:

"losses 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; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the flow of wastewater into the facility's headworks on an annual basis."

An example of why this de minimis exemption is important is illustrated by one of ECA's plastics plants. This facility has three surface impoundments in a CWA system that receive streams such as cooling water, clean condensates, and stormwater. Because of the nature of these streams, there is no need for biological treatment. Current facilities allow for the capture of any residual plastic pellets that may be discharged and provide hold-up time prior to discharge (which would allow for hydrocarbon recovery in case of a spill). Within the process there is a stream that is 30% methanol and 70% water. Any drop from this stream would, at the point just before it enters the wastewater system, be a D001 stream and would exceed 10 times UTS for methanol even though it

was just a drop. There is always the potential that a pump leak could result in some drops of this material entering the sewer system leading to the impoundments. Without the de minimis clause outlined above, and with a narrow point of generation definition, it would be possible that the LDR Phase IV rule could trigger extensive requirements on the surface impoundments (which would presumably be called pre-bio since there is no significant biological treatment) for only a few drops of material.

In addition to the example provided above, some facilities may have minor streams, either continuous or intermittent, that do not meet the definition of de minimis losses indicated above. Again, to avoid triggering extensive requirements for low risk facilities, EPA should add a second de minimis exemption for characteristic wastes. This exemption should be based on the condition that the total volume of the characteristic waste sent to the CWA system is less than 1% of the total flow at the headworks of the wastewater surface impoundment. There should be no condition that underlying hazardous constituents (UHC) not exceed 10 times UTS, since the total volume of the streams is so small and the effort to quantify UHC for small streams can be a substantial burden. In addition to the sampling and analytical costs, the cost of establishing sampling points in hard-piped systems can be very expensive. These costs, in addition to the costs associated with any additional treatment or surface impoundment modifications that might be required, would be disproportionate to any potential environmental benefit that could be achieved. It is important that EPA maintain focus on significant risk areas, versus overly regulating low/no risk cases, where costs far exceed any slight benefit.

RESPONSE

The Agency is retaining the de minimis exemption previously promulgated at 40 CFR 268.1(e)(4). In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore,

the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

DCN PH4P059
COMMENTS Commenter Exxon Chemicals Americas
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 059
COMMENT

1. ECA recommends EPA select Option 1 in the Phase IV rulemaking. In addition, this letter includes comments applicable to Options 2 and 3 should EPA decide to further refine and progress these options.

2. EPA should grant a general applicability exemption for Wet Weather Flow Impoundments

4. ECA recommends modifications to the de minimis exemption proposed for wastewaters in CWA systems

Selection of Option 1 would rely on achievement of Clean Water Act (CWA) permit requirements and Universal Treatment Standards (UTS) at the point of discharge from a CWA treatment system to constitute treatment equivalent to RCRA LDR requirements. This is a defensible option based on the decision in *Chemical Waste Management v. EPA*, 976 F.2d(D.C. Cir. 1992), and EPA's documented statements that "the risks addressed by this rule(from the LDR Phase III preamble and by extension to LDR Phase IV) ...are very small relative to the risks presented by other environmental conditions or situations."

The CMA comment letter provides more detail on this issue. Summary comments include:

When RCRA was enacted in 1976 Congress explicitly excluded from regulation under RCRA industrial discharges subject to permits under the CWA to avoid duplication and to recognize the lead role of the CWA in regulating discharges to surface waters.

EPA's proposed Phase III approach, setting treatment standards at the discharge point of the CWA treatment system, represents accommodation of the RCRA LDR requirements to the pre-existing CWA program. This approach must preserve the integrity of CWA treatment systems while addressing the RCRA LDR program.

The proposed Phase IV rule runs contrary to Congress' intentions in structuring Subtitles C and D D because two of the options impose technical requirements on Subtitle D units under subtitle C authority. While the *Chemical Waste Management* decision indicated EPA may have authority in some circumstances to set LDR treatment standards for characteristic wastes below the characteristic level, it did not state that EPA has jurisdiction to impose technical requirements on Subtitle D units that are accepting no hazardous wastes.

There is nothing in the Chemical Waste Management decision which precludes EPA from selecting Option 1. In fact, in the court's discussion of CWA systems there is not a single mention of sludges, leaks, air emissions, or any other movements of constituents to the environment, other than what exits the CWA system at its point of discharge. Proposed Options 2 and 3 go far beyond the Court's discussion.

EPA itself has indicated publicly that it would not oppose RCRA legislative fixes which would not require the regulations proposed under the LDR Phase III and IV rules (reversing the Chemical Waste Management decision).

EPA is not permitted to select Option 3, which would require treatment of Decharacterized Wastes to UTS standards before placement in a CWA surface impoundment. This would eliminate any reasoned or appropriate accommodation of the CWA in the LDR program. The Chemical Waste Management decision held that accommodation with the CWA is required "to the maximum extent practicable". The court also made it clear that placement of decharacterized wastes in CWA surface impoundments prior to satisfying UTS standards was acceptable and a reasonable accommodation with CWA.

EPA has overstated the risks addressed by the Phase IV proposal. The data used is very old, often more than 10 years old, and does not reflect current operations. CMA has provided more specific information on this issue

CWA systems are currently extensively regulated by both the CWA and numerous Clean Air Act regulations either in effect or under development. Many facilities are already subject to MACT (Maximum Achievable Control Technology) standards and other standards under various Clean Air Act authority. For example, chemical manufacturing facilities are often subject to the HON (Hazardous Organic National Emission Standards for Hazardous Air pollutants), the Benzene NESHAP rule, the Offsite Waste Recovery MACT standard, and/or by the Wastewater New Source Performance Standard. Typically these regulations result in managing wastewater emissions prior to treatment in surface impoundments due to the significant cost associated with covering and controlling emissions from these impoundments, which can be several acres in size. EPA's proposal to extend the applicability of the new Subpart CC RCRA air emission standards to nonhazardous waste surface impoundments is inappropriate and not justifiable. The current Subpart CC rule has major deficiencies which are currently under review and legal challenge.

2. EPA should grant a general applicability exemption for Wet Weather Flow Impoundments

Many petrochemical/refinery facilities, as well as other large industrial complexes, utilize integrated sewer systems in which both process wastewaters and storm waters are managed in the same collection system. Wet weather flow impoundments (surface impoundments) are commonly used in integrated sewer systems to temporarily store excess water during storm events. The water diverted to these impoundments is then either transferred to a wastewater treatment system at controlled rates or directly discharged through a permitted system.

ECA recommends that wet weather flow impoundments, which are a key to the efficient operation of a facility's wastewater management system, be exempt from the LDR Phase IV regulations because of their low environmental risk and the significant cost of replacing and/or closing the impoundments.

Wet weather flow impoundments pose an inherently low environmental risk since:

Underlying Hazardous Constituents (UHCs) in the wet weather flow impoundment influent have the potential to exceed Universal Treatment Standards (UTS) only for very short periods of time. Such exceedances may occur during the beginning of a storm event when the proportion of process wastewater to stormwater is greatest. Peak storm event flows will be primarily stormwater with the result that the flow weighted average concentration of UHCs in the impoundment influent during a storm event will be significantly below UTS levels.

Wet weather flow impoundments are generally at minimum levels, so the residence time of any UHCs present is short. This further reduces the potential for leakage to groundwater and air emissions. Wet weather flow impoundments are critical to the efficient operation of a facility's wastewater management system by providing temporary storage capability so that the large amounts of water managed during a storm event will not flood the wastewater treatment system. In a biological treatment system, a hydraulic overload will reduce organic removal efficiency and cause the exceedance of total suspended solids effluent limits.

Closing and replacing wet weather flow impoundments would be prohibitively expensive. At one Exxon facility these impoundments cover more than 25 acres. The actions necessary would include one or more of the following steps:

Significantly enlarge the capacity of the wastewater transfer system downstream of the point where wet weather flow is currently

diverted to the impoundments and enlarge the treatment system capacity to manage peak flows that will occur only during storm events.

Replace the impoundments with a tank storage system capable of managing large volumes of combined process wastewater and stormwater.

Segregate the process wastewater from stormwater. This would be prohibitively expensive due to the size and location (under operating units) of sewer systems in well-established industrial complexes.

Based on these points, EPA should grant a general applicability exemption for wet weather Flow Impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P059
COMMENTS Commenter Exxon Chemicals Americas
RESPONDER SS
SUBJECT EQUV
SUBJNUM 059
COMMENT

6. ECA recommends that the LDR Phase III and IV rules be progressed only after integrating comments from both rules, finalizing the Point of Generation definition, providing regulatory text, and integrating the Hazardous Waste Identification Rule impacts and timing

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Although the Agency cannot predict exactly how the constituent-specific exit levels for certain low-risk solid wastes in the HWIR final rule will compare with the UTS levels, the Agency did consider available risk information when making decisions regarding final treatment standards in the technology-based LDR program. During the development of final treatment standards, the Agency examined whether the UTS for some metals may be far more stringent than any reasonable minimize threat level. The initial reasoning was that if the Agency found evidence that the final HWIR minimize threat level was likely to be much higher than the proposed UTS for any toxic characteristic wastestream, EPA would consider whether to raise the proposed treatment standard prior to finalizing the Phase IV rule. EPA examined the proposed HWIR exit levels for

the toxic metal wastes including in the Phase IV rulemaking. When EPA compared the proposed HWIR exit levels to the UTS for each metal constituent, the Agency found that the BDAT level was, in most cases, within an order of magnitude of the proposed HWIR exit level. There were significant differences between the proposed HWIR exit level and UTS for two metals, ____ and _____. As discussed in section ____ of the preamble to the Phase IV final rule,.....[need to complete once preamble language is written]

In light of the differences in timing between the HWIR and the Phase IV final rule, there is too much uncertainty about what the final HWIR levels will be to incorporate those levels into the UTS for any constituents. Section 3004(m) of RCRA requires that the Agency promulgate treatment standards that specify levels or methods of treatment that "substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." The proposed HWIR levels have not yet been established as "minimize threat" levels. Therefore, EPA is promulgating the Phase IV rule and the HWIR rule independently. EPA will address any differences between the UTS and the HWIR exit levels either in the final HWIR rule or once both rules are promulgated.

DCN PH4P060
COMMENTS American Dental Association
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 060
COMMENT

In general, ADA believes of the three options presented in the Notice, the use of existing programs is the preferred means to address non-hazardous surface impoundments. Such an approach would avoid unnecessary costs to impacted parties, which include the many small businesses and other entities whose wastes are treated at such facilities. ADA also believes that the proposed regulations regarding surface impoundment sludge have not been shown to be necessary as a legal and practical matter. In addition, ADA urges EPA, in this and other regulatory contexts, to ensure that any new treatment standards for toxic characteristic metal wastes account for differences among specific metal substances, and differentiate appropriately among different metal species.

As an initial matter, ADA's review of the proposed regulations indicates that they would leave unchanged the existing special requirements for conditionally exempt small quantity generators (CESQGs) in 40 C.F.R. 261.5. Accordingly, waste from such generators that is considered hazardous would not be implicated in the proposed surface impoundment controls or treatment standards if the CESQG treats or disposes of its waste through means authorized by 40 C.F.R. S 261.5 but by means other than a facility subject to the proposed regulations.

With respect to the proposed regulations regarding decharacterized wastes in surface impoundments, ADA supports the first of the three regulatory options presented. As discussed in the Notice, EPA is already equipped with a number of regulatory tools to address potential releases from surface impoundments. Although not stated in the Notice, these tools include the 40 C.F.R. Part 503 regulations regarding biosolids use and Disposal. Use of existing federal and state programs would avoid needless complication of the already complex regulatory environment regarding wastewater and solid waste. Such an approach would help limit compliance costs for the many entities (many of them small businesses) whose waste materials are treated at surface impoundments.

ADA's review of the proposed Option 2 regulation indicates that wastewater containing only de minimis quantities of characteristic waste would be exempted under proposed 40 C.F.R. 268.1(e)(4)(ii). 60 Fed. Reg. 43691. However, the exact meaning and scope of this

exemption as currently drafted is not clear. ADA requests that EPA clarify this language, particularly with regard to flow requirements at a surface impoundment, and with regard to whether the reference to the 40 C.F.R. 268.48 limits is an additional or alternative criteria for the de minimis exemption.

Even aside from these concerns, ADA notes that the Notice includes little if any discussion regarding health or environmental risks associated with pre-biological sludge. ADA is particularly concerned regarding the potential for new sludge regulations to result in restrictions or burdens on use of amalgam, even though the only data on this issue found no detectable soluble mercury when amalgam particulate was subjected to a simulated wastewater treatment processing. This study was performed under contract with the ADA and has been submitted for publication. ADA urges EPA to fully demonstrate actual risks presented by sludge disposal before proceeding with any new regulations in this area.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P061

COMMENTS BP Chemical

RESPONDER SS

SUBJECT EQUV

SUBJNUM 061

COMMENT 3) BP Chemicals believes that the decharacterized wastewaters managed in CWA surface impoundment's and disposed in UIC wells are very low risk wastes and urges the Agency to adopt "Option 1" as the Phase IV rulemaking approach. BP Chemicals believes that the risks posed by decharacterized wastes and the units managing these wastes are very low. This is especially true for the streams managed in class 1 underground injection control units where there is virtually no exposure to the underlying hazardous constituents in the wastes. In the preamble and in testimony before Congress, the Agency has clearly indicated that they also believe the risks are low relative to other more pressing environmental issues. Furthermore, for the reasons stated above in comments 1 and 2, BP Chemicals believes the risk screening analysis conducted to support this rule significantly over estimates the potential risks posed by these wastes. Therefore, we strongly urge the Agency to adopt "Option 1" as the approach for regulating these units. This option relies on Phase III to address decharacterized wastes and defers to other Agency programs to address potential releases from these nonhazardous units. We believe adequate controls currently exist on these units. All of the nonhazardous units at BP Chemicals sites receiving potentially decharacterized wastewaters are subject to State Subtitle D requirements (Ohio and Texas), Clean Air Act HON NESHP and/or Polymer & Resin MACT Standards, and RCRA Corrective Action. Existing controls are clearly in-place and potentially confusing duplicative rules are not needed.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P061

COMMENTS BP CHEMICAL

RESPONDER SS

SUBJECT EQUV

SUBJNUM 061

COMMENT 5) Class I UIC wells with approved no migration petitions should not be required to modify their petitions to account for the underlying hazardous constituents in decharacterized waste streams. To do so would create an unnecessary burden on both the regulatory community and the Agency with no resulting benefit to the health or the environment. 6) EPA should clarify in the Phase IV rule that Class I injection wells with approved no migration exemptions are given an exemption for the injection of decharacterized wastes. 7) Addition of waste codes to a no migration petition for newly listed wastes should be considered a nonsubstantive revision.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

EPA clarifies that, as a result of withdrawing the proposed provisions, generators with decharacterized wastewaters that are managed by injection into Class I non-hazardous injection wells do not have to identify underlying hazardous constituents.

The commenter suggested that EPA state that additional of waste codes to a no-migration petition should be considered a non-substantive revision. This issue is outside the scope of the Phase IV rules. The commenter should contact the USEPA Office of Water.

DCN PH4P061
COMMENTS BP CHEMICAL
RESPONDER SS
SUBJECT EQUV
SUBJNUM 061

COMMENT 5) Class I UIC wells with approved no migration petitions should not be required to modify their petitions to account for the underlying hazardous constituents in decharacterized waste streams. To do so would create an unnecessary burden on both the regulatory community and the Agency with no resulting benefit to health or the environment. In 1993 EPA and CMA agreed to settle a lawsuit regarding land disposal restriction issues by signing a settlement agreement, or Joint Stipulation, whereby facilities with no migration exemptions that do not change the waste stream injected will not be affected by LDRs which affect decharacterized waste. Thus, not only does EPA have the authority, but the Agency has already committed to allowing facilities with no migration exemptions to be exempt from further future regulations. In the final Phase IV rule EPA should clarify the status of Class I UIC wells with no migration exemptions because the Joint Stipulation clearly directs that EPA is to allow: "characteristic wastes that cease to exhibit the characteristic prior to injection into Class I wells with Agency-approved no-migration exemptions, regardless of whether the applicable waste codes for the characteristic are specified in the final petition's approval. No further demonstration would be required for characteristic wastes that are rendered nonhazardous prior to injection absent the introduction of a new constituent not already considered in the demonstration." (emphasis added) The Phase IV proposal will result in the need for facilities to modify petitions even though the injected waste has not changed and the waste at the point of injection is not characteristically hazardous. EPA can prevent confusion and misdirected use of public and private moneys and resources by making it clear in the final rule that the LDRs are not applicable to Class I wells that inject decharacterized wastes and that have obtained no migration exemptions. Approved petitions have already addressed the potential for migration of hazardous constituents from the injection zone. As a result, there is no impact on human health or the environment. The change proposed in the applicability of treatment standards to waste streams already described in the no migration petitions does not affect the technical basis for the petition approval.

This type of situation was contemplated and both the CMA and EPA agreed that petition modifications would not be required. 6) EPA should clarify in the Phase IV rule that Class I injection wells with approved no migration exemptions are given an exemption for the injection of decharacterized wastes. As discussed above, the Joint Stipulation is rather clear in that LDRs do not apply to decharacterized wastes injected at facilities with approved no migration exemptions. The agreement states, "No further demonstration would be required for characteristic wastes that are rendered nonhazardous prior to injection absent the introduction of a new constituent not already considered in the demonstration." We ask that EPA clarify this exemption in the final rulemaking. 7) Addition of waste codes to a no migration petition for newly listed wastes should be considered a nonsubstantive revision. There may be times when a facility with an approved no migration exemption injects a newly listed waste or characteristic waste that is not decharacterized prior to injection. In this situation, although the waste is fully characterized in the petition, the new waste codes are not. EPA has preferred to have no migration petitions identify all waste codes that apply to the waste at the point of injection. This situation is merely a paperwork change that does not raise new technical issues or require very detailed review. The technical basis for the petition approval has not changed. The Agency should clarify in the final rule that addition of waste codes to an approved no migration petition is a nonsubstantive revision.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

The commenter suggested that EPA state that additional of waste codes to a no-migration petition should be considered a non-substantive revision. This issue is outside the scope of the Phase IV rules. The commenter should contact the USEPA Office of Water.

DCN PH4P061

COMMENTS BP CHEMICAL

RESPONDER MC

SUBJECT EQUV

SUBJNUM 061

COMMENT 3) BP Chemicals believes that the decharacterized wastewaters managed in CWA surface impoundment's and disposed in UIC wells are very low risk wastes and urges the Agency to adopt "Option 1" as the Phase IV rulemaking approach.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P061

COMMENTER BP CHEMICAL

RESPONDER MC

SUBJECT EQUV

SUBJNUM 061

COMMENT 8) BP Chemicals supports the EPA's approach of exempting wastewater impoundment's located at permitted TSDF's from the Phase IV management standards.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P061

COMMENTER BP CHEMICAL

RESPONDER MC

SUBJECT EQUV

SUBJNUM 061

COMMENT 8) BP Chemicals supports the EPA's approach of exempting wastewater impoundment's located at permitted TSDF's from the Phase IV management standards. As indicated in previous comments, BP Chemicals urges the Agency to adopt the "Option 1" approach to Phase IV rulemaking. Should the Agency not select Option 1 and instead promulgate an "Option 2" type approach, than BP Chemicals supports the proposed exemption for wastewater impoundment's located in facilities subject to RCRA Corrective Action. During the sites RCRA permitting process, all solid waste management units (SWMU's) are subject to unit specific evaluation, reporting and potential agency corrective action authority. This process is more than adequate to ensure any releases from these units are being addressed.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P063
COMENTER Laidlaw
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 063
COMMENT

1.0 Management Standards for Air Emissions

Laidlaw Environmental Services, Inc. (LES) generally supports EPA's approach of extending the substantive requirements of Subpart CC regulations to surface impoundments in CWA, CWA-equivalent or nonhazardous wastewater treatment systems that accept wastes that have been decharacterized. We also believe that it is reasonable to not require facilities subject to Clean Air Act (CAA) standards for hazardous air pollutants to be subject to controls under this rulemaking, so long as the applicable CAA standard has been promulgated in final form, the standard addresses the specific underlying hazardous constituent(s) of concern, and the standard contains control requirements at least as stringent those proposed in this rulemaking.

While we believe that the application of the Subpart CC requirements will achieve the goal of minimizing cross-media transfer of pollutants, we are concerned over the manner in which EPA is addressing this issue. The technical provisions of the Subpart CC standard, which is the cornerstone for addressing air emission control under Phase IV, are not only in a state of flux, but are the subject of a number of legal challenges by industry and environmental groups. In addition, the Offsite Waste NESHAPS rule, which was proposed in October 1994 and contains provisions almost identical to Subpart CC, has yet to be finalized. Add to this the fact that the Agency included within the preamble, discussion of various "concepts" for implementing the requirements, but failed to include specific regulatory language, and you have a situation in which the regulated community has very little in the way of "substantive" proposals upon which to comment. While it is recognized that the Agency has been working under specific time constraints, it must allow for adequate public comment on proposed rules. It is recommended that once the Subpart CC provisions have been fully "finalized," the Agency publish a supplemental proposal outlining the specific provisions for controlling air emissions from surface impoundments managing decharacterized waste. In developing the air emission control requirements for surface impoundments, The Agency must be cognizant of several key issues:

1. Waste Determination Procedures

The discussion in the preamble to the proposed rule does not specify the analytical method to be used to make waste determinations, although the reader can infer that the method(s) of choice would be those required by Subpart CC. The preamble also discusses that facilities which are subject to other CAA standards, in particular the Offsite NESHAPS, would not be subject to the provisions in this proposal. Waste determination is critical to both Subpart CC and the Offsite NESHAPS; it determines whether or not a facility is subject to the technical requirements of the rules. Currently, the procedures utilized in these two rules, while similar, are substantially different. The Agency must be careful to craft the requirements of the Phase IV air emission standards so as not to subject the regulated community to an overlapping, and confusing, set of regulatory requirements. To this end it is recommended that the Agency unify the waste determination procedures for the Offsite NESHAPS, Subpart CC and the Phase IV air emission requirements.

2. Regulatory Threshold

In its comments on the proposed Subpart CC standards, LES supported The Agency's determination of a 500 ppmw threshold for applicability of the technical requirements of the rule. In the final Subpart CC rule, this threshold was lowered to 100 ppmw. LES does not believe the Agency has adequately demonstrated the justification for this action. In the Phase IV proposal, The Agency has applied the 100 ppmw threshold as the determinant of whether or not a particular unit is subject to the control requirements. LES does not believe that the Agency has adequately justified the application of the 100 ppmw threshold to wastes managed in non-hazardous surface impoundments. It is recommended that the EPA apply the threshold level of 500 ppmw that was originally proposed in the Subpart CC rule.

3. Surface Impoundment Covers

In the proposed rule, EPA discusses the use of air supported structures and membrane covers as potential methods for controlling air emissions. While these types of controls may be technically feasible, there are worker health and safety concerns that must be addressed. Covers placed on or around these impoundments would have the tendency to concentrate the vapors given off from the impoundment within the headspace beneath the cover. Has the Agency considered the impact of exposure of the employees working in and around the covered impoundments to the concentrated vapors in its risk analysis? At minimum, the Agency should consider

specific OSHA confined space and personnel protective equipment requirements. Are these technical controls ones that OSHA could support given the potential risks to workers?

Finally, LES supports EPA's use of the alternative control device requirements of demonstrating either a 95 percent reduction in the total organic content of the vapor stream vented to the control device or, in the case of an enclosed combustion device, a reduction of the vapor stream to a level less than or equal to 20 ppmw on a dry basis corrected to 3 percent oxygen. This will provide the regulated community with the flexibility needed to comply with the rule while providing adequate protection of human health and the environment. It is recommended, however, that the 20 ppmw option not be limited to enclosed combustion devices but be expanded to other types of control devices (e.g., activated carbon).

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P064
COMMENTS Commenter Dow Chemical
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 064
COMMENT

I. EPA SHOULD SELECT OPTION 1 FOR PHASE IV LDR RULEMAKING

The Chem Waste decision does not mandate that EPA set standards for non-hazardous waste surface impoundments handling decharacterized non-hazardous wastes.

As a result of the Chem Waste decision (*Chemical Waste Management v. EPA*, 976 F. 2d 2(D.C.Cir. 1992)), EPA was required to set treatment standards for prohibited decharacterized hazardous wastes which are managed in Clean Water Act (CWA) facilities. The Phase III Land disposal Restriction rule was proposed in response to this mandate and satisfies the mandate of the Court ruling. Dow does not agree that the court decision extends beyond the Phase III rule to require creation of a set of regulatory standards for non-hazardous waste CWA surface impoundments. The court stated that "we agree with the EPA that, under RCRA, diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments which are part of an integrated CWA treatment train" *Id.* at 22. The Court also said: "Thus we hold that, whenever wastes are put in CWA surface impoundments before they have been treated pursuant to RCRA to reduce the toxicity of all hazardous constituents, these wastes must be so treated before exiting the CWA treatment facilities." *Id.* at 22. These statements illustrate that the focus of the Chem Waste decision was to require that decharacterized wastewaters meet the land disposal restrictions at the point where the wastewaters exit the CWA treatment facility. Furthermore, Subtitle D surface impoundments can be used as long as they are part of a CWA-regulated treatment system. The Court's ruling does not in any way specify that Subtitle D surface impoundments be modified to meet a Subtitle C management standard. Instead, the court's stipulation was that decharacterized wastewaters be treated to a level such that the NPDES discharge was equivalent to RCRA LDR treatment standards.

Creating management standards for non-hazardous waste CWA surface impoundments would violate the intent of Congress and inappropriately expand Subtitle C authority to non-hazardous waste facilities.

RCRA Subtitle D was established under RCRA as the mechanism by

which non-hazardous facilities are regulated, primarily by the states. It is inappropriate and contrary to the law to create technical standards under Subtitle C for management of non-hazardous wastewaters. Such standards would impose extensive RCRA requirements on low-risk units and create a very real economic hardship for those who currently are in compliance with all Clean Water Act requirements. Congress did not intend for this to happen or they would have required EPA to regulate both hazardous and non-hazardous waste management units in the same way. Phase IV concerns are properly and sufficiently addressed by other regulatory authorities.

RCRA is not the only vehicle for addressing the concerns raised by EPA in this Phase IV rule. There are many other rules in place that provide environmental safeguards and eliminate the need for additional regulation of non-hazardous waste CWA surface impoundments.

The potential for leaks from non-hazardous waste impoundments are addressed in several ways. Corrective action programs are required for all RCRA-permitted or interim status hazardous waste treatment, storage, and disposal facilities (TSDF). These programs require specific plans to evaluate and address any contamination from solid waste management units on the property whether the unit is hazardous or non-hazardous. Additionally, there are various state prohibition on releases to groundwater (Texas) and numerous state Subtitle D programs. As an example, the Louisiana Solid Waste Amendments (1993) require a synthetic liner with leachate collection for new solid waste impoundments. Groundwater monitoring is required for both new and existing units with requirements for remediation if contamination is detected. These state regulations also exempt systems which function similarly to those described in LDR Phase IV as tertiary impoundments (e.g., pH adjustment).

Should EPA adopt Option 2 from LDR Phase IV, Dow agrees that such impoundments located at a permitted or interim status TSDF should not have LDR Phase IV requirements.

Dow strongly supports the EPA position that impoundments located at TSDFs would have no further controls under LDR Phase IV. This is an important recognition by the agency that corrective action requirements under RCRA will adequately address Phase IV issues for non-hazardous waste CWA surface impoundments. Subsection u, of the Solid Waste Disposal Act states:

Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and

Solid Waste Amendment of 1984 by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in the unit.

RCRA corrective action program requires an interim status or permitted facility to (1) identify all solid waste management units, (2) determine if a release has occurred and its nature/extent, (3) address the clean up of contaminated media, and (4) incorporate the final solutions into a Compliance Plan. These measures ensure that any risk associated with a unit including non-hazardous waste CWA surface impoundments are addressed and minimized. EPA does not need to add another layer of regulation to this already comprehensive corrective action program and should exempt units at TSDF facilities from Phase IV LDR should Option 2 be adopted.

Should EPA choose to adopt Option 2 for LDR Phase IV, then a proposed rule must be published for notice and comment.

EPA has not written any language for this rule (which Dow believes was appropriate since Option 2 should not be adopted), however, this makes it very difficult to comment on the potential impact to non-hazardous waste units. If EPA chooses to promulgate a Phase IV rule based on Option 2, it must first propose actual language that can be thoroughly evaluated by the regulated community. Also, EPA must wait until Phase III is final before proposing any Phase IV language. Both proposals are interrelated and the direction for LDR Phase III must be fully known in order to assess potential impact to Phase IV units from any proposed regulatory language. To adopt Option 2, EPA must propose specific language and then only after LDR Phase III rules are final in order to comply with EPA's notice and comment requirements.

Subpart CC is currently undergoing extensive revision and should not be evaluated for inclusion in this rule until all the changes to the rule have become final.

The Subpart CC standard, although promulgated, is still undergoing extensive debate and significant revisions are anticipated in the near future. It is inappropriate to be advancing a management scenario in the midst of such controversy. EPA should reexamine Subpart CC after all changes are final to determine if these requirements are justified for non-hazardous waste surface impoundments. At a minimum, EPA should not reference Subpart CC requirements as a control mechanism for Phase IV until after all

Subpart CC changes are final.

Should EPA select Option 2 and extend the applicability of RCRA Subpart CC, then it is requested that the applicable standards be taken from 40 CFR Part 265 and not 40 CFR Part 264.

Dow is concerned that the reporting requirements under Subpart CC for non-hazardous wastewater CWA surface impoundments are more stringent than those reporting requirements for RCRA interim status or <90 day hazardous waste surface impoundments. In the Phase IV proposal, EPA discusses reporting requirements and references the Part 264 requirements under Subpart CC (60 FR 43666). These requirements would require reporting in certain circumstances for non-hazardous waste surface impoundments, however, RCRA interim status or <90 day hazardous waste facilities do not have any reporting requirements under 40 CFR Part 265 Subpart CC. It is unreasonable for EPA to require reporting for non-hazardous wastewater surface impoundments when RCRA interim status and <90-day hazardous waste facilities are exempt from such reporting under Subpart CC (especially since EPA agrees that these units are low risk). In order to rectify this inequity, EPA should reference the Part 265 standards of Subpart CC rule if used for the Phase IV rules.

Should EPA adopt Option 2, Dow urges EPA to accept alternative programs by states or other authorities as a whole and not line-by-line or constituent-by-constituent comparison.

At 60 FR 43671, EPA states that "to the extent that state programs require ground water monitoring and corrective action that include the UTS constituents of concern and are substantially similar to today's proposal, EPA is deferring to those State and Tribal programs." EPA further describes that where there are differences, a facility may need to modify the existing ground water monitoring program. Such micro management of minor differences between programs is both burdensome and confusing to the regulated community and is particularly inappropriate when considering the low risk presented by these Phase IV facilities. EPA should defer to the alternative programs in their entirety.

Should EPA choose Option 2 for LDR Phase IV, Dow agrees that a two-year national capacity variance is appropriate but requests that the additional two years for retrofitting also be available to facilities that choose to discontinue receiving decharacterized wastewaters.

At 60 FR 43663, column 1, EPA discusses the two-year national capacity variance and a self-implementing procedure for two additional years. Dow appreciates the self-implementing procedure

that EPA is proposing. However, Dow believes it is necessary for the agency to allow the additional two years for facilities that choose to discontinue placing decharacterized wastes into a surface impoundment but may need the two additional years to accomplish the transition. EPA is allowing such a time frame for facilities that choose to continue receiving decharacterized wastewater but need the additional time to complete the retrofit. Furthermore, the more time that is provided, the more likely source reduction can be implemented as opposed to treating the wastewater or retrofitting the impoundment. Dow recommends that EPA grant an additional two years for facilities that stop receiving decharacterized wastewater after the promulgation date. Should EPA choose Option 2 for LDR Phase IV, they should recognize that sludges and leaks from non-biological treatment and post-treatment systems can also be low risk.

At 60 FR 43660, EPA states that sludges and leaks from biotreatment and post-biotreatment systems would not be covered by Phase IV due to the lower risks posed by these units. Dow agrees that this exemption is appropriate, however, we believe that there are other types of units that treat wastewater prior to placement in a surface impoundment which likewise achieve effective removal of constituents. These units are air strippers and steam strippers used to remove HAPs or VOC from wastewater. They achieve a significant removal efficiency of volatile organic compounds. In fact, steam strippers are considered to be the reference technology for Group 1 wastewater streams under the HON. The wastewater from these non-biological treatment units is generally of discharge quality and probably already meets NPDES limits for specific constituents, however, they may send the water to tertiary impoundments for cooling. Since these units are similar to biological units in terms of risk, EPA should exempt those surface impoundments that are downstream of air strippers and steam strippers from the Phase IV requirements.

III. OPTION 3 MUST NOT BE ADOPTED AS THE MECHANISM OF COMPLIANCE FOR PHASE IV.

Option 3, which requires treatment of decharacterized wastewater to UTS limits prior to placement in a Subtitle D surface impoundment, is not mandated by the Chem Waste decision and should not be adopted by EPA. It would be extremely costly and provide only minor environmental benefit.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P065

COMMENTS Safety-Kleen Corp.

RESPONDER SS

SUBJECT EQUV

COMMENT 1. Safety-Kleen encourages the Agency to address the Phase III and Phase IV LDR rulemakings concurrently, with a common promulgation and implementation schedule. EPA has acknowledged that it did not have time to review the comments submitted on the Phase III LDR proposal prior to publication of the Phase IV LDR notice of proposed rulemaking. Safety-Kleen believes that the comments submitted on the Phase III proposal will strongly influence the Agency's actions and decisions on this Phase IV proposal. Safety-Kleen agrees with the Agency's statement that "[d]ecisions on controlling releases will be made after careful consideration of public comments on both proposals (60 FR 43655/2)." Furthermore, Safety-Kleen believes that careful evaluation of the Phase IV comments will enhance the Phase III rulemaking. Clearly, the Phase III and Phase IV rules affect highly similar facilities and are "sister" regulations. However, the currently anticipated promulgation schedules differ by several months, which will result in staggered implementation deadlines. This may cause confusion in the regulated community (e.g., which rule applies at which time), and may result in additional and unnecessary burdens (e.g., the cost and training requirements for changing the content and format of the LDR notification form multiple times within a year). Safety-Kleen encourages the Agency to promulgate the Phase III and Phase IV regulations simultaneously, in order to simplify the implementation process for the state agencies and the regulated community, and to enhance facility compliance.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final

rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P065

COMMENTS Safety-Kleen Corp.

RESPONDER SS

SUBJECT EQUV

COMMENT 4. Safety-Kleen has significant concerns about the approach taken in the Phase IV proposal to addressing emissions from non-hazardous surface impoundments. The Agency should defer to the Clean Air Act (CAA) to address emissions from non-hazardous waste surface impoundments. The Agency has already developed numerous regulations that limit air emissions from non-hazardous waste surface impoundments, and still others are in development. Safety-Kleen encourages the Agency to defer to existing requirements under the Clean Air Act, and to refrain from creating further duplicative and overlapping air emission requirements under RCRA. Safety-Kleen believes that imposing air emissions requirements under Phase IV would not significantly reduce emissions and would not have any beneficial effect on human health and the environment. Emissions of hazardous air pollutants (HAPs) are already subject to extensive regulation under Section 112 of the Clean Air Act (CAA). Section 112 requires EPA to promulgate emission standards for industrial source categories with respect to nearly two hundred emission standards for industrial source categories, establishing Maximum Achievable Control Technology (MACT) for such categories. The following CAA regulations currently or will soon impose HAP emission restrictions on non-hazardous waste surface impoundment operations: Hazardous Organic National Emission Standards for Hazardous Air Pollutants (HON), promulgated on April 22 1994 (59 FR 19402); Benzene NESHAP, promulgated on January 17, 1993; Off-Site Waste and Recovery Operations MACT, proposed October 13, 1994 (59 FR 51913); and MACT standards for other industrial categories (including production, manufacturing, and distribution source categories), promulgated, proposed, and anticipated according to the statutory requirements of Section 112 of the CAA. These regulations place stringent controls on the emission of hazardous air pollutants from industry operations. Because regulations promulgated under Section 112 are designed to address all major sources of HAPs within the relevant source category, there is simply no need to impose duplicative requirements under RCRA. The provisions of the Clean Air Act governing nonattainment areas (CAA Sections 171 through 193) may also overlap with the proposed RCRA air emissions requirements. Those requirements impose restrictions (including

the use of Reasonably Available Control Technology, or RACT) on the emissions from existing major air pollution sources in areas that have not attained established air quality standards. The EPA has released Control Technique Guidelines establishing RACT for many industrial operations. Finally, new or modified facilities may be subject to several requirements, as discussed below. For certain industries, EPA has promulgated New Source Performance Standards (NSPS) under CAA Section 111, imposing specific requirements on all facilities within the industrial category. For areas in compliance with air quality standards, CAA Sections 160 through 169, governing Prevention of Significant Deterioration, require new or modified sources to install the Best Available Control Technology (BACT). For nonattainment areas, CAA Sections 171 through 193 require new and modified sources to apply the technology that achieves the Lowest Achievable Emissions Rate (LAER). Under the Phase IV regulations as proposed, a facility could become subject to both CAA and RCRA regulations addressing similar air emissions but with different regulatory requirements (some facilities are already subject to multiple and contradictory regulations governing air emissions). Safety-Kleen strongly objects to a regulatory scheme that creates situations of contradictory regulation at a given facility. Safety-Kleen therefore urges the EPA to address the control of air emissions through CAA authority as opposed to generating separate RCRA-authorized regulations. The Agency should not impose RCRA Subpart CC organic emissions regulations on non-hazardous waste surface impoundments. Safety-Kleen believes that extending the applicability of the Subpart CC RCRA air emission standards to non-hazardous waste surface impoundments is neither appropriate nor justifiable. The Subpart CC regulations are applicable to certain hazardous wastes. However, the impoundments proposed to be regulated under the Phase IV LDR rule manage only non-hazardous ("decharacterized") wastes. Therefore, Subpart CC should not apply. The Agency has acknowledged that the RCRA Subpart CC regulations promulgated in December, 1994, have significant flaws and require modification prior to implementation. There have been numerous legal challenges to the Subpart CC regulations, and the effective date of the rule has twice been delayed because major issues have not been resolved. Furthermore, the Agency has indicated that it intends to publish both a technical correction to the regulation and at least one major revision to the rule. Even if the Agency were

to determine that the Subpart CC requirements are to be imposed on units regulated under Phase IV, these requirements should be deferred until the many problems with the Subpart CC regulations are resolved. In fact, Safety-Kleen recommends that the Agency avoid applying the Subpart CC requirements in any proposed regulation until the problems with Subpart CC are adequately addressed and the rule is corrected.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P065

COMMENTS Safety-Kleen Corp.

RESPONDER SS

SUBJECT EQUV

COMMENT 6. Safety-Kleen recommends that the Agency clarify that the Phase IV LDR regulations do not apply to on-site stormwater surface impoundments. Surface impoundments are commonly used to manage stormwater at industrial facilities. Waters accumulated in these impoundments may flow into and out of the impoundments via overland flow, through earthen ditches, or through pipes and culverts. Discharges from these impoundments are generally controlled under stormwater permits or, in some cases, National Pollutant Discharge Elimination System (NPDES) or Publicly-Owned Treatment Works (POTW) discharge permits. Safety-Kleen believes that stormwater impoundments can be legitimately exempted from the Phase IV LDR requirements because the impoundments are generally regulated under a separate regulatory program (Clean Water Act, or CWA, stormwater regulations), the influent to the impoundment is generally not hazardous waste, the impoundments pose low environmental risk, and stormwater impoundments are critical to effective facility operation.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P065

COMMENTER Safety-Kleen Corp.

RESPONDER SS

SUBJECT EQUV

COMMENT 9. Safety-Kleen believes that wastewater surface impoundments located in both interim status and permitted TSDFs should be automatically exempted from all Phase IV management standards. Safety-Kleen agrees with EPA that permitted TSDFs should be totally exempted from the Phase IV LDR requirements. During the RCRA permitting process, Subtitle D wastewater surface impoundments receiving hazardous waste constituents are required to be evaluated (as Solid Waste Management Units, or SWMUs) to determine if they are causing unacceptable environmental impact via emissions to the air, runoff to surface waters, and seepage into the soil and ground water. Such evaluations are used by the permitting authority to determine if any additional monitoring and/or corrective action is needed for the impoundments on a case-by-case basis. These inspections and subsequent later activities (as needed) assure that the impoundments are being operated in an environmentally acceptable manner. TSDFs under interim status should be provided the same total exemption as permitted TSDFs, because the same SWMU evaluations with subsequent monitoring and/or corrective action, as needed, will be conducted during the Part B permitting process or can be conducted under Section 3008(h) of RCRA. Safety-Kleen believes it would be unreasonable and unnecessary to force interim status facilities to comply with Phase IV requirements if the regulatory agency has the authority to evaluate the facility and to request site-specific corrective action measures based on those inspections and any further monitoring. Safety-Kleen requests that the total exemption from all Phase IV management standards be provided for both interim status and permitted TSDFs.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final

rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P065

COMMENTER Safety-Kleen Corp.

RESPONDER SS

SUBJECT EQUV

COMMENT 10. The tank-based exemption reference included in Figure 1 is unnecessary. The "tank-based" exemption question is an unnecessary question because (1) Phase IV regulations only address wastewater surface impoundments, and (2) the question as to whether or not wastewater surface impoundments are present has been previously addressed. Safety-Kleen recommends removing the tank-based exemption question from Figure 1.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P065

COMMENTER Safety-Kleen Corp.

RESPONDER HM

SUBJECT EQUV

COMMENT 5. Safety-Kleen agrees with the Agency's definition of point-of-generation for certain sludges. Safety-Kleen agrees with the Agency's stated intent to consider the generation of sludges in Subtitle D wastewater surface impoundments as new points of generation and, as such, outside of Subtitle C LDR controls since they are, by definition, non-hazardous wastes. Safety-Kleen points out that a similar definition would apply to a tank performing the same function.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P066
COMMENTS American Petroleum Institute
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 066
COMMENT

In both the Phase III NPRM and this proposal, EPA acknowledges that the risk addressed by these proposals are relatively low compared to other environmental problems faced by the Agency. 60 Fed. Reg. 11704 (Mar. 2, 1995); 60 Fed. Reg. 43656 (Aug. 11, 1995) Indeed, EPA has supported legislation which allows EPA not to promulgate the Phase III rule and clarifies that EPA is not required to proceed with the Phase IV rule. API understands EPA must address the demand of the Chemical Waste Management, Inc. v. EPA, 976 F. 2d 2 (D.C. Cir. 1992); cert. den 113 U.S. 1961 (1993) (hereinafter the "Third-third" decision) and the consent decree lodged in that action. However, EPA should not compound the burden imposed by the redundant regulation attributed to the Third-third decision by adopting an overly expansive reading of the opinion or promulgating a rule that goes much further than the court required. Since these impoundments pose little, if any, risks to human health or the environment, EPA should: exempt stormwater impoundments that receive dilute process water during storm events from the Phase III and Phase IV rules, and; adopt Option I in the proposal; i.e., no further regulation of non-hazardous impoundments. A discussion of these stormwater impoundments is provided later in these comments.

II. EPA Should Allow Public Review of the Regulatory Language of the Option they Use.

EPA has not proposed any specific language for the three options discussed in the preamble. To the extent that this suggests that the Agency is inclined to adopt Option I, API strongly supports EPA's approach. However, should EPA choose Options II or III, the Agency should provide public review of the regulatory language. The details of the regulatory language are particularly important in the implementation of a complex regulatory scheme, such as the LDRs. While EPA has explained its intent in the preamble, it is important for the regulated community to have an opportunity to review the actual regulatory language to ensure that it achieves EPA's intent.

Consequently, EPA should submit any regulatory language to the docket prior to finalization of the rule.

III. EPA Should Adopt Option I, No Further Requirements for Non

Hazardous Surface Impoundments.

EPA discusses three potential options for addressing what, if any requirements should attach to land based units that manage decharacterized wastes. API urges EPA to adopt Option I, which provides for no additional controls outside of the Phase III LDR. As discussed more fully below, the "Third-Third" decision does not require, or even suggest, any additional requirements for surface impoundments receiving decharacterized waste, nor was the "treatability group doctrine" affected by the court's decision. Furthermore, the low risks posed by surface impoundments regulated under the Clean Water Act (CWA) do not warrant any additional regulation under RCRA Subtitle C.

A. The "Third-Third" Decision Does Not Require EPA To Impose Additional Controls For Non-Hazardous Surface Impoundments.

API disagrees with the discussion in the preamble suggesting that the "Third-Third" opinion suggests that EPA should adopt requirements on surface impoundment integrity in order for the impoundment to be RCRA equivalent. Indeed, API believes that, rather than being ambiguous or silent on this issue, the court's opinion is quite clear in its conclusion that an equivalency demonstration is unnecessary for these surface impoundments. Any contrary reading of the opinion by the Agency to support such demonstrations would constitute a construction of the opinion that is clearly adverse with the court's intent, and that would be contrary to the requirements of RCRA section 1006(b) that mandates the integration of RCRA and the CWA.

In explaining its position on this issue, the Agency states that the opinion could be read to encompass requirements respecting surface impoundment integrity, air emissions and sludge treatment. 60 Fed. Reg. 43657. In EPA's view, the court's primary concern is to distinguish treatment impoundments versus impoundments disposing of previously hazardous wastes. An impoundment would be considered a disposal impoundment by EPA if it allows untreated hazardous constituents to enter the environment through impoundments or from sludges in amounts sufficient to impose significant risks.

To the contrary, the only correct reading of the opinion is that the court considered the continued use of non-hazardous surface impoundments (which include both Subtitle D impoundments and impoundments under Subtitle C delay of closure) to receive and treat decharacterized wastes to be permissible, provided only that the wastes themselves are ultimately treated to levels equivalent to RCRA standards. The opinion focuses primarily on whether

diluted or decharacterized wastewaters are treated so as to comply with the Section 3004(m) treatment standards (or their equivalent). For example, the court stated that "treatment of solid wastes in a CWA surface impoundment must meet RCRA requirements prior to ultimate discharge into waters of the United States." Language can be found throughout the opinion that indicates a focus on the treatment of the wastewaters themselves, whether prior to or during containment in surface impoundments. Nowhere in the opinion does the court criticize or even address the substantive merits of non-hazardous (v. Subtitle C) impoundments.

By way of contrast, the opinion makes several critical references to the continued use of unlined surface impoundments, which confirms that the court contemplated their continued use managing decharacterized wastes. For example, in describing the CWA treatment systems at issue, the court stated that:

Following aggregation, the facilities sometimes place the combined stream in an unlined surface impoundment as part of the CWA treatment train. These impoundments do not meet RCRA Subtitle C standards and they are regulated solely under RCRA Subtitle D.

Later, the court expressly held that diluted, decharacterized wastes "may be placed in subtitle D surface impoundments that are part of an integrated CWA treatment train," provided that the wastes are themselves treated to meet RCRA standards. Several other references are made by the court to the continued use of unlined impoundments to receive decharacterized wastes, but nowhere in the decision does the court indicate or infer that the use of unlined impoundments is prohibited or that an equivalency demonstration is required.

Further language supporting a conclusion that an equivalency demonstration is not required may be found in the court's discussion of the integration that is required under section 1006(b)(1) between RCRA and the CWA. In referring to the "accommodation" required by section 1006, the court agreed that "allowing temporary deposit of decharacterized wastes [in a Subtitle D impoundment] is a reasonable accommodation so long as complete circumvention of the treatment standards does not occur."

The court clearly attempted to remove any confusion or doubt regarding its decision, and API believes that it did so with respect to this issue. In explaining the impact of its holding, the court clarified that a decharacterized waste may be placed in a non-hazardous surface impoundment:

if the resulting CWA treatment fully complies with RCRA §

3004(m)(1). In other words, the material that comes out of CWA treatment facilities that employ surface impoundments must remove the hazardous constituents to the same extent that any other treatment facility that complies with RCRA does.

Beyond any doubt, the court considers non-hazardous surface impoundments to be a component of the entire CWA treatment facility, and it is the ultimate discharge of wastes from this facility (i.e., end-of-pipe discharges) and not the status of the facility itself, that is the court's paramount concern. Finally, the most convincing language on this issue is found in the court's summary of whether CWA systems treating diluted or decharacterized ICR wastes satisfy the section 3004(m)(1) standard. In this section of the opinion, the court stated that:

the result here is unique to CWA systems. Nothing herein permits the placement . . . of hazardous wastes or formerly hazardous wastes which have not yet met section 3004(m)(1)

Treatment Standards into non-Subtitle C surface impoundments except in existing CWA treatment systems which ultimately treat the streams to full section 3004(m)(1) standards.

Clearly the court was well aware that these CWA treatment systems do not meet Subtitle C requirements (e.g., they utilize unlined surface impoundments), but it did not make any statement, implicit or otherwise, that the design and operation of the impoundments itself had to be altered.

In summary, there is absolutely no language in the opinion that can support the Agency's interpretation that an equivalency demonstration for surface impoundments treating diluted or decharacterized ICRT wastes is necessary to ensure that the court's mandate is satisfactorily met. In fact, API believes the mandate is clear in its approval of the continued and unaltered use of such impoundments; again, provided only that the wastestreams themselves are ultimately meet RCRA standards.

C. The Non-Hazardous CWA Surface Impoundments Do Not Warrant Further Regulation.

As EPA observes in the preamble to the proposed rule, there are numerous regulatory authorities that EPA has or may use to regulate non-hazardous surface impoundments that pose unacceptable risks. 60 Fed. Reg. 43659-60. Indeed, since 1990 there have been numerous regulations, several of which are discussed below, which have dramatically reduced the toxicity of water managed in wastewater treatment systems. For example, the organic Toxicity Characteristic (TC) rule became effective subsequent to the promulgation of the "third-third" rule. 55 Fed. Reg. 11798 (Mar.

29,1995). The TC rule regulates the toxic constituents that are most likely to pose a risk to human health or the environment. As a consequence of the TC rule, many surface impoundments that were not regulated when the "Third-third" rule was originally promulgated, have become subject to RCRA Subtitle C or, to avoid such regulation, have reduced the concentration of toxic

constituents entering the impoundments.

Similarly, the Agency has promulgated listings that have subjected CWA surface impoundments to full RCRA Subtitle C regulation. For example, in 1990 EPA listed F037-038, Primary Refining Sludge. 55 Fed. Reg. 46354 (Nov. 2, 1990). This listing resulted in the Subtitle C regulation of surface impoundments upstream of biological treatment at petroleum refineries. If EPA believes that there are unacceptable threats posed by a particular unit, the Agency can apply a more appropriate mechanism to address those threats. A listing determination allows the Agency to target its regulations towards actual environmental threats, rather than employ an over inclusive blunt instrument such as option III in the preamble.

In addition, many federal air requirements reduce the risk posed by leaks and sludges as well as risks posed by air emissions. For example, in the recent Refinery MACT rule 60 Fed. Reg. 43244 (Aug. 18, 1995) the most common compliance strategy is to reduce the concentration of VOCs before the waste water is introduced to the surface impoundment. Since there are less hazardous organics entering the impoundment, the risks from any water leaking is reduced, as well as the potential adsorption of organics in the sludge. In fact, the industries covered by the Phase IV PROPOSAL have or will have air regulations that could cover wastewater treatment systems if they represent a significant source of emissions. All the industries identified as being affected by the Phase IV draft RIA are in whole or in part covered under a source category that is regulated or will be regulated under Section 112 of the CAA. Compare *id.* to 57 Fed. Reg. 31576 (July 16, 1992). As a consequence, EPA either has or will have an opportunity to regulate air emissions from waste water in a manner most appropriate to the covered facility.

In addition to these significant regulations that would directly overlap with any Phase IV regulation of surface impoundments, there are numerous reporting requirements that allow EPA or the States to ensure that toxic constituents do not pose an undue risk. Both CERCLA and the CWA have such reporting requirements. See 40C.F.R. §§302.6, 122.42. These general requirements are in addition to specific permit conditions.

In addition, regulation of nonhazardous, subtitle D surface impoundments is contrary to the RCRA statutory scheme, and would provide redundant regulation to state Subtitle D regulatory

programs. As EPA knows, RCRA generally reserves the regulation of non-hazardous solid waste units to the states. See RCRA Section 4001et.seq.. Accordingly, EPA should not leverage its authority under section 3004(m) to regulate non-hazardous surface impoundments.

IV. Discussion of Option 2.

If EPA decides to regulate non-hazardous surface impoundments under the phase IV rule, EPA should adopt Option 2. As explained more fully below, biological surface impoundments do not pose significant environmental risks for sludges or leaks. Furthermore, since all petroleum refineries are subject to the petroleum refinery MACT, air emissions from waste water units are already regulated under the CAA.

1. Any Water Leaking from ABT Impoundments is Substantially Treated.

The March 2, 1995 proposal states EPA's concern that leaks from surface impoundments may result in the disposal, rather than treatment, of decharacterized wastewaters. Therefore, the Agency is considering the addition of controls on surface impoundments used to manage such wastewaters. API strongly believes that aggressive biological treatment (ABT) units and units downstream used to manage decharacterized wastewaters do not warrant additional controls.

3. Air Emission from Wastewater Treatment Systems are Effectively Regulated under Other Authorities.

As EPA is aware, air emissions from the wastewater treatment systems of petroleum refineries are extensively regulated. The Benzene Waste NESHAP, 40C.F.R. Part 61, Subpart FF, New Source Performance Standards (NSPS) For Petroleum Refinery Wastewater, 40 C.F.R. 60 Subpart QQQ; the Petroleum Refining MACT, 60 Fed. Reg. 43244 (Aug. 18, 1995); and the RCRA Subpart CC Rule, 40C.F.R. 264 and 265 Subpart CC; all extensively regulate air emission from non-hazardous surface impoundments. These controls are in addition to state requirements.

API supports EPA's position in Option II that facilities which are covered by CAA regulations (such as petroleum refineries) will automatically fulfill any Phase IV air emission obligations. However, to avoid duplicative requirements, it is essential that EPA clarify that however a facility complies with CAA requirements, through bubbling, de minimis thresholds, or technology standards, it would not be subject to any additional Phase IV air requirements. For example, under the refinery MACT, if a facility manages less than 10 metric tons of benzene per year

in total waste, there are no further waste water requirements. In this instance, even though control measures are not required, such a facility has achieved compliance with CAA regulations. Therefore, since this standard was deemed environmentally protective under the CAA, EPA should not impose further unwarranted regulations on wastewater impoundments in the Phase IV rule.

4. Groundwater Monitoring Provisions

API agrees with EPA that groundwater monitoring should not be required for biological and post biological impoundments. However, API offers the following comments on EPA's discussion of groundwater monitoring. The Option II groundwater monitoring proposal was based the Municipal Solid Waste Landfill (MSWLF) rule, which allows an authorized state to approve a multi-unit groundwater monitoring system. However, this flexibility is not included in Option II of the Phase IV proposal. Under the proposed Option II, a separate groundwater monitoring system is required for each individual treatment unit. API believes that if Option II is chosen, a flexible approach towards monitoring system design should be included in the rule.

For example, there are instances where the addition of monitoring wells between closely spaced impoundments will not significantly increase the effectiveness of a groundwater monitoring system. A mounding effect will be present on the watertable beneath a leaking surface impoundment, locally altering groundwater flow. Therefore, a monitoring well placed between two units will not be able to identify which of the units is leaking, even with prior knowledge of unaltered groundwater flow. While detection may not be as rapid, the only environmental impact that could result from one multi-unit monitoring system is to the soil and groundwater directly beneath the unit(s). Conversely, there are instances where interferences exist between surface impoundments (such as public water bodies, old Solid Waste Management Units or other contaminated property) and the ability to separately delineate the units is essential.

API therefore feels that if Option II is adopted by EPA, a flexible approach is warranted, allowing each facility to design an appropriate groundwater monitoring system based on site-specific conditions.

If a release from a surface impoundment is validated, EPA only allows two options. 60 Fed. Reg. 43672. First, the decharacterized wastestream can be rerouted to a tank. Second, the surface impoundment can be retrofitted with a double liner and leachate collection. Both of these options can be

prohibitively expensive and unnecessary.

Containment and removal/treatment of the groundwater should be acceptable as alternative means to allow continued use of an impoundment. Containment mechanisms such as generation of a cone of depression to collect and treat the contaminated groundwater or installation of a slurry wall around an impoundment provide adequate control of contaminated groundwater and do not force expensive tankage or double liner/leachate collection expenditures.

V. EPA Should Not Adopt Option III.

API agrees with EPA's conclusion that Option III would not be an appropriate way to regulate these units. Requiring MTR for surface impoundments managing non-hazardous waste is clearly not required by the "Third-third" decision or the RCRA statutory scheme. It would create an excessive regulatory burden and would override many reasoned and considered decisions that EPA has made in facility specific regulations. Further, retrofitting a large impoundment at a petroleum refinery could cost as much as \$100,000,000 per impoundment. As EPA observed, these costs are not justified by the risks that these units present. However, should EPA make the clearly erroneous decision to adopt Option III, the four year retrofit provision of RCRA SECTION 3005(j)(6) should apply. If EPA determines that surface impoundments which manage decharacterized ICRT wastes must meet additional technical requirements, then the full four-year compliance period provided by section 3005(j) must be available. The issue is governed by the position adopted by EPA that section 3005(j)(6) provides that non-MTR impoundments must retrofit or close within four years of the date of identification or listing of the newly regulated wastes. See, 57 Fed. Reg. 37218-22 (Aug. 18, 1992). API supported this interpretation in its February 24, 1992 comments on the proposed LDR for Newly Identified Wastes and Hazardous Debris, 57 Fed. Reg. 958 (Jan. 9, 1992), and in its March 20, 1992 comments on the proposed Timing of Surface impoundments Retrofitting Rule, 57 Fed. Reg. 4170 (Feb. 4, 1992), both of which are incorporated here by reference.

API believes the four-year retrofit period should run from the effective date of the forthcoming revised treatment standards for ICRT wastes. First, it would be both illogical and inequitable to conclude the period would run from the initial identification of the ICR wastes (well over four years ago), since generators of such wastes will have no way of knowing that their decharacterized non-hazardous wastes could not be placed in non-MTR surface impoundments. Thus, it would be impossible to comply with that

requirement now and unfair to start the clock before notice is given that additional requirements will apply.

Second, beginning the four-year period from the date new treatment standards take effect would be consistent with EPA's conclusion in the Third-Third rule, that the period for variances from a new treatment standard can begin at the time the new standard is identified, given that for a change in the standard is functionally equivalent to applying a standard in the first instance (e.g., triggers a need to find additional or different treatment capacity). See, 55 Fed. Reg. 22594 (capacity variance for K048-K052 transferred to Third-Third). The same analysis holds for imposing MTR's under section 3005(j), i.e., the affected parties would not know and could not begin to plan for, nor undertake expensive and technically difficult retrofits or replacements of impoundments until they became aware that the decharacterized ICRTs remain subject to section 3004(m) treatment standards.

VII. Wet Weather Flow Impoundments Should Be Exempt from the Phase III and IV LDRs.

Because many petroleum refineries are located in areas that receive large amounts of rainfall, most facilities have extremely large stormwater impoundments. These impoundments generally fall under two classifications. One type of system is connected to segregated storm sewers. These systems would not receive any process water, and therefore would not be covered under either the Phase III or IV LDR rules. The second type of system is a stormwater impoundment which receives relatively small amounts of process water which may contain decharacterized wastewaters, along with stormwater. (Hereinafter referred to as "wet weather flow impoundments"). Wet weather flow impoundments further break down into two different types. Sometimes the mixture of stormwater and process water is retained in the basin and fed back through the wastewater treatment system at a controlled rate. In other cases, the mixture of process water and stormwater is sufficiently clean so the water is directly discharged. Separate stormwater impoundments are necessary so that the large amounts of water managed during a storm event will not flood the wastewater treatment system and interfere with the efficiency of the aggressive biological treatment unit. Also, by diverting a large flow of water it helps a wastewater system maintain its effluent discharge limit, especially for total suspended solids (TSS). Wet weather flow impoundments are fundamentally different from process water impoundments considered under this

rulemaking. Typical wet weather flow impoundments only receive waste water infrequently, in some cases only one or two days a year. Thus, they are most often dry, and lack not only the hazardous constituents, but also the hydraulic head necessary to influence migration of constituents. Further, if the UTS are exceeded at all, they are only exceeded for short, transient peaks at the beginning of storm events when the proportion of process water to storm water is the greatest. Consequently, there is limited total loading of UTS constituents into wet weather flow impoundments. Because of the very low levels of UTS constituents

that find their way into such impoundments, and the lack of a migration mechanism for constituents, the environmental risk posed by these units is small or nonexistent.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P068
COMMENTS COMMENTER Amerada Hess Corp.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 068
COMMENT

Amerada Hess Corporation has reviewed both the final regulation and the subsequent revision to the Option 2 flowchart and revisions to the proposed BDAT standards. It believes that Option 1 as set forth in the proposal presents the most reasonable and practicable approach of the options presented in the proposed regulation. Amerada Hess understands that the intent of Option 1 is to allow reliance on Phase III LDR regulations to satisfy the equivalence standard and link Clean Water Act end-of-pipe and LDR standards to assure that the mass removal of Underlying hazardous Constituents (UHC) occurs in the CWA impoundment to the same extent that it does in conventional RCRA treatment systems. If our understanding is correct, we can support promulgation of rules encompassing option 1. We view this mechanism, coupled with existing regulatory mechanisms such as those detailed in the proposal, as preventing or sufficiently diminishing risks due to cross-media releases. Adopting this option will diminish concerns about excessive complexity and cost from the more complicated option 2 and the overregulation represented by option 3, which would undermine the value of impoundment-based wastewater treatment systems.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P071
COMMENTS SOCMA
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 071
COMMENT

SOCMA strongly supports Option 1 as an appropriate and reasonable accommodation and integration of the overlapping compliance obligations which otherwise could be imposed on Subtitle D surface impoundments under the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act (RCRA).

As is discussed below, SOCMA opposes both Options 2 and 3 because they could seriously and unnecessarily disrupt the existing wastewater treatment systems used by its members without any demonstrated environmental benefit. Option 2 is of particular concern due to its potential to rely on a series of exemptions which could subject smaller companies or facilities to significant and disproportionate regulatory burdens. SOCMA member small companies and small facilities would be at a significant disadvantage as a result of the significant capital and operating costs which they (but not all others in the industry) would incur in order to cope with the regulatory impact of Option 2.

COMMENTS

I. The Potential Impact of the Proposed Phase IV Land Disposal Restrictions Rule Must be Assessed Relative to the Batch Manufacturing Typical of SOCMA Members

In order to understand the potential significance of the proposed Phase IV Land disposal Restrictions (LDR) rule on SOCMA members, it is necessary to understand and consider the unique nature of batch processing.

Batch processing provides an efficient and frequently the only method to make small quantities of chemicals to meet specific needs and consumer demands for specialized products. Batch processors must be able to respond quickly to new requirements by customers, fill small market niches and develop new products. They are at the cutting edge of new technology, provide products often made nowhere else in the world and help keep imports down by responding quickly to customer demands for service and delivery. This segment of The Chemical industry retains a high degree of entrepreneurship and must retain the flexibility to meet changing needs and new technological developments.

Batch processes are distinct from continuous operations in that a continuous operation has a constant raw material feed to each unit

operation and continual product withdrawal from each unit operation. A batch process has an intermittent introduction of changing raw materials into the process and varying process conditions imposed on the process within the same vessel. Thus, waste streams from batch processes can vary substantially over time as compared with those of a continuously operating process. Characteristically, this segment of the chemical industry produces small amounts of a large variety of specialty chemicals, which result in the generation of low volume, highly variable wastestreams.

For example, a study conducted by SOCMA of several member company facilities indicated that the number of different products produced at a given facility could vary significantly from one year to the next. In addition, at a facility where the number of products produced was relatively more constant from one year to the next, there still could be an almost complete turnover in product mix, with few repeat products from one year to the next. Thus, while there are several aspects of batch processing operations that have significant compliance consequences for SOCMA members with respect to the Phase IV LDR RULE, the most notable characteristic is the variable nature of the product mix which makes it impossible to predict which products will be made over the course of a year.

II. SOCMA Supports Option 1 and Opposes Options 2 and 3 Due to Their Potential to impose Disproportionate Compliance Burdens on Many SOCMA Member Operations

Since many SOCMA members currently commingle formerly characteristic waste with nonhazardous wastewater in Subtitle D surface impoundments and rely on these impoundments to meet wastewater standards under the Clean Water Act, SOCMA is concerned about the potential impact of the proposed Phase IV LDR rule on its members. As SOCMA commented in previous comments on the Phase III LDR proposal, we believe that the court's mandate of minimizing threats to human health and the environment must be read in the context of the overlapping compliance obligations imposed by different environmental programs. SOCMA supports Option 1 as set out in the proposal, because it reflects an appropriate accommodation and integration of the different waste treatment obligations imposed by the Clean Water Act(CWA) and the air emissions standards imposed by the Clean Air Act.

For example, the Clean Air Act Hazardous Organic National Emission Standards for hazardous Air Pollutants (HON) wastewater emissions provisions apply only to plants which are major emission sources of

HAPs. It is unclear from the preamble discussion whether or not plants which would be regulated by the HON but for the fact that they are minor sources would be exempt from the air emissions controls of Option 2. Similarly, the applicability levels for process waste Volatile Organic Hazardous Air Pollutants (VOHAPs) in the HON are significantly higher than the Volatile Organic Compounds (VOC) applicability levels Under Option 2. As a result, many small plants could be subject to Option 2 air emission controls which were not considered to be sufficiently significant sources of air pollutants to be regulated under the HON.

By way of further example, SOCMA notes that the majority of its members that generate hazardous waste have made a conscious decision to manage this waste in 90-day storage areas in order to avoid obtaining a Part B permit for on-site treatment, storage or disposal operations. In order to comply with the provisions of the 90-day exemption, SOCMA members have carefully reviewed their waste generation activities and developed and implemented strategies which ensure that facilities do not generate or store more waste than can be stored and shipped within the constraints of the 90-day time limit. Presumably, there are significant environmental benefits both to SOCMA members and the public as a result of these tailored waste management activities.

Yet, under Option 2, SOCMA members who comply with the 90-day rule are placed at a disadvantage insofar as they would be regulated under Option 2 while facilities with a Part B permit would not. EPA generally justifies the exemption by reference to the RCRA site-wide corrective action program. Yet, even EPA has acknowledged that there is a wide range of experience under the corrective action program. Thus, it is quite possible that Subtitle D impoundments at a particular Part B permitted facility may not be addressed under a corrective action program for some time to come. Yet, Option 2 would automatically impose controls over comparable impoundments at facilities which have used the 90-day storage option notwithstanding the absence of any adequate demonstration of harm or risk from these units.

SOCMA is also concerned about the potential impact of the Agency's proposed exemptions with respect to pending Clean Air Act regulations. It is unclear how these exemptions would be implemented. For example, if those exemptions were not clearly defined by the effective date of Option 2 under Phase IV, then facilities presumably would still have to proceed to comply with the Phase IV regulation in the interim. Insofar as some compliance options would require significant capital expenditures

to modify existing wastewater treatment systems, it is unclear how SOCMA members might benefit from the so-called relief afforded under a subsequently promulgated Clean Air Act regulation. SOCMA appreciates that, in crafting Option 2, the Agency sought to identify simple mechanisms which would allow one to conclude that a facility might present a lower risk and therefore could appropriately be exempted from regulation. SOCMA would like to make three overall comments regarding this approach. First, the exemptions created under Option 2 finesse rather than directly address the key problem which underlies the Phase IV LDR proposal -- the absence of a degree of risk which warrants regulation. Second, a number of the exemptions require knowledge of precise levels of constituents present in a waste and thus would impose the types of testing obligations which are particularly burdensome for SOCMA MEMBERS, as noted below. Third, the exemption approach is also flawed insofar as the exemptions fail to provide equivalent treatment for comparable, or even identical, operations.

B. SOCMA Members Would Be Disproportionately and Unfairly Burdened By Compliance with Either Option 2 or 3

Determining that only decharacterized wastes will enter a Subtitle D impoundment, as would be required under Option 1, imposes a manageable compliance obligation on SOCMA MEMBERS. However, adoption of either Option 2 or 3 would impose significant, unnecessary testing burdens on SOCMA members. As noted above, the frequently changing nature of wastestreams from batch processing operations is a characteristic trait of many SOCMA member operations. The frequent testing that would be required for SOCMA members to evaluate these waste streams for either Option 2 or 3 would cause them to incur disproportionate compliance costs and to carry a burden not shared equally by other segments of the chemical industry.

Further, these small companies and facilities would need to assess, prior to deciding whether to make a new or slightly different product, whether the resulting wastestream might trigger any new or different compliance obligations with respect to their Subtitle D surface impoundments. Previously, companies could satisfy this concern by determining that only decharacterized wastes would enter those impoundments. However, under Options 2 or 3, the companies would need to consider how to quantify and treat the relatively insignificant levels of hazardous constituents that might be present in the ultimately non-characteristic wastestream resulting from a new or modified product. Failure to predict accurately or manage correctly the resulting waste stream could

have significant compliance consequences. A small company or facility understandably might be reluctant to undertake a new production activity under these circumstances. Thus, Options 2 and 3 could adversely affect the flexibility that is a critical element of competition in the batch processing sector. By contrast, these same concerns would not be present at ongoing continuous operations which have constant raw material feed and continuous product withdrawal.

A final compliance concern relates to the sheer complexity of both the proposed and existing land disposal restrictions regulations. Small companies often do not have the resources to call upon an outside consultant or lawyer to lead them through this regulatory maze. Nor do they necessarily have extra in-house staff that is in a position to play that same role. Simply understanding when, how and whether the Phase IV LDR regulations would apply to batch operations at small facilities could be a major compliance obstacle. This is particularly true insofar as Options 2 and 3 would take the unprecedented step of imposing these complex, RCRA hazardous waste compliance obligations on previously unregulated, nonhazardous Subtitle D surface impoundments.

Consequently, SOCMA believes that the Agency has failed to understand and assess the potential impact of Options 2 and 3 on many of its members. Given that the Agency has failed to identify any significant environmental benefits from these options, EPA should conclude its Phase IV LDR rulemaking by adopting Option 1.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P071
COMMENTS SOCMA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 071
COMMENT

The proposed Phase IV LDR rule also discusses two other options: Option 2, which would impose additional regulations on certain facilities with several listed exclusions; and Option 3, which would require full treatment to Universal Treatment Standards (UTS) levels prior to release to a surface impoundment. SOCMA opposes Option 3, because it fails to recognize the need for an accommodation between the CWA and RCRA (as the Agency itself points out in the proposal). SOCMA also opposes Option 2, because its impact on SOCMA members potentially could be the same as Option 3: compliance could require that facilities segregate decharacterized wastewaters and treat them separately from other wastewaters.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P071
COMMENTS SOCMA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 071
COMMENT

A. The Proposed Exemptions Noted for Option 2 Could Place an Unjustified Level of Control on Smaller Operations

As an initial matter, SOCMA notes that it is difficult, based upon the preamble discussion alone, to try to determine the exact scope and impact of the multiple exemptions which are used to define the universe of facilities that would be covered by proposed Option 2. Nonetheless, based on the information that is available, SOCMA is concerned that small facilities may not be addressed by these multiple exemptions.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P074
COMMENTS Department of Defense
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 074
COMMENT

DoD supports Option One mentioned in the proposed rule. Option One has the advantage of utilizing existing federal and state programs to regulate potential leaks and air emissions from surface impoundments. Option One thus avoids duplication and is consistent with EPA's goal of clarifying and simplifying EPA LDR requirements. 60 Federal Register at 43679.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P080

COMMENTS EASTMAN

RESPONDER SS

SUBJECT EQUV

SUBJNUM 080

COMMENT IV. EPA Cannot Legally Adopt Option 3 In its Chem Waste decision, the court made clear that non-hazardous CWA treatment impoundments can be used to manage untreated characteristic wastes if two criteria are met: (1) the waste is decharacterized and (2) the toxicity of hazardous constituents in the waste has been reduced before exiting the CWA treatment facility. "Thus, we agree with the EPA that, under RCRA, diluted formerly characteristic wastes may be placed in subtitle D surface impoundments which are part of an integrated CWA treatment train. However, in order for true "accommodation" to be accomplished, we find that RCRA treatment requirements cannot be ignored merely because CWA is Implicated; that is, the CWA does not override RCRA. Thus, we hold that, whenever wastes are put in CWA surface impoundments before they have been treated pursuant to RCRA to reduce the toxicity of all hazardous constituents, these wastes must be so treated before exiting the CWA treatment facilities. In other words, CWA facilities handling characteristic wastes must remove the characteristic and decrease the toxicity of the waste's hazardous constituents to the same degree that treatment outside a CWA system would." (976 F.2d at 37) (emphasis added) EPA's option 3 requires that characteristic hazardous wastes meet UTS for underlying hazardous constituents before entering the impoundment. This option is totally inconsistent with the court's dictate since it would prohibit the management of untreated decharacterized wastes in nonhazardous CWA impoundments. It must therefore be rejected by EPA.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P080

COMMENTS Eastman

RESPONDER SS

SUBJECT EQUV

SUBJNUM 080

COMMENT B. EPA Should Include Draft Regulatory Language in Rulemaking

Proposals In the Phase IV rule, EPA has provided preambular discussion of several options for potentially regulating air emissions, leakage and sludges from nonhazardous CWA impoundments that are used to manage decharacterized hazardous wastes. However, the Agency has failed to provide complete draft regulatory language with the proposal. Eastman believes that it is important for regulatory language to be included in proposals so that the public can ascertain whether ideas and concepts discussed in the preamble have been properly carried forward to actual rule language. The current proposal resembles an Advanced Notice of Proposed Rulemaking (ANPRM) in that a number of options are discussed, rather than having a specific proposal from the Agency, and regulatory language is not provided. Eastman believes that the Agency and public are better served when regulatory language is included in a proposal. Review of both the preamble and regulatory language by the public can help identify errors and needed corrections before a rule is finalized.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Since the Agency is not finalizing any of the options addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act, the commenter's concerns regarding publication of regulatory language for notice and comment is moot.

DCN PH4P080

COMMENTS EASTMAN

RESPONDER MC

SUBJECT EQUV

SUBJNUM 080

COMMENT A. EPA Should Clarify That the Phase III and IV LDR Standards

Are Applicable Only to Nonhazardous Impoundments In the Phase III and IV LDR proposals, the Agency addresses the need to treat underlying hazardous constituents that are present in decharacterized hazardous wastes which are managed in Clean Water Act (CWA) surface impoundments. The discussed in the court's decision and the Agency's Phase III and IV proposals focus on the management of decharacterized wastes in nonhazardous. subtitle D surface impoundments that are not subject to the more rigorous RCRA subtitle C regulations (note the following citations). 1. Chemical Waste Management ' . EPA 976 F. 2d, 2, pages 3344 - "Treatment facilities operating pursuant to the CWA often receive waste streams from many sources, and generally these streams are combined for centralized treatment. Following aggregation, the facilities sometimes place the combined stream in unlined surface impoundments. These impoundments do not meet the RCRA subtitle C standards and they are regulated solely under RCRA subtitle D (solid wastes). (emphasis added). 2. 60 FR 11704 - "Characteristic hazardous wastes that are treated or diluted such that they no longer exhibit a characteristic are no longer subject to RCRA Subtitle C management standards, and thus may be discharged into units that are not subject to the stringent RCRA Subtitle C standards, such as [I]C wells." (emphasis added) 3. 60 FR 11705 - "(3) situations where characteristic hazardous wastes are diluted, lose their characteristic(s) and are then managed in centralized waste water management land disposal units (i.e. subtitle D surface impoundments or Class I injection wells)(emphasis added) 4. 69 FR 11708 - "EPA is considering, in addition to evaluating equivalence at the point of ultimate discharge to surface waters or to a Publicly-Owned Treatment Works (POTWs) ("end-of-pipe equivalence"), conditions for determining equivalence of treatment for decharacterized wastes managed in nonhazardous waste (subtitle D) impoundments which would ..." (emphasis added) 5. 60 FR 43657 - "Today's options to address surface impoundment releases specifically apply to Subtitle D (nonhazardous) surface impoundments that receive decharacterized wastes." (emphasis added) It is clear

that the court's concern and directives were aimed at decharacterized wastes managed in nonhazardous subtitle D impoundments. It did not express concerns, or require any additional controls, for similar wastes managed in subtitle C permitted impoundments. At two of Eastman's manufacturing plants, decharacterized hazardous wastes are treated in centralized CWA treatment systems that are comprised of state-of-the-art above-ground tank systems followed by land-based surface impoundments. At both facilities, the land-based units are not only permitted under the facility's CWA permit but are also fully permitted under RCRA subtitle C pursuant to the provisions of RCRA 3005(j)(3). Impoundments permitted subject to this statutory provision must be ones which: (A) contain treated wastewater during the secondary or subsequent phases of an aggressive biological treatment facility subject to a permit issued under section 402 of the Clean Water Act (or which hold such treated waste water after treatment and prior to discharge); (emphasis added) (B) are in compliance with generally applicable ground water monitoring requirements for facilities with permits under subsection (c) of section 3005(c); and (C) (i) are part of a facility in compliance with section 301(b)(2) of the Clean Water Act. or (ii) in the case of a facility for which no effluent guidelines required under section 304(b)(2) of the Clean Water Act are in effect and no permit under section 402(a)(1) of such Act implementing section 301(b)(2) of such Act has been issued, is part of a facility in compliance with a permit under section 402 of such Act, which is achieving significant degradation of toxic pollutants and hazardous constituents contained in the untreated waste stream and which has identified those toxic pollutants and hazardous constituents in the untreated waste stream to the appropriate permitting authority. RCRA section 3005(j)(3)(D)(ii) requires that owners/operators provide certification that the impoundments meet the conditions of 3005(j)(3), based on analysis of toxic pollutants and hazardous constituents that are likely to be present in the untreated waste stream. This certification must be made by a registered professional engineer with academic training and experience in ground water hydrology. Eastman believes that neither the court nor EPA intended to impose additional Phase III or IV LDR restrictions on CWA impoundments that are already permitted and stringently regulated under RCRA Subtitle C, such as the Eastman impoundments discussed above. However, Eastman is concerned that

the Agency has loosely used the terms "surface impoundment" and "wastewater treatment systems" when discussing the requirements of the phase m and IV rules, rather than using specific terms like "nonhazardous surface impoundments" or "Subtitle D impoundments. (see the following example). 60 FR 43654 - The Environmental Protection Agency is addressing issues arising from the September 25, 1992 decision of the U.S. Court of Appeals in *Chemical Waste Management v. EPA*, 976 F. 2d (I).C. Cir. 1992) on the equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act (CWA) to treatment required by the Resource Conservation and Recovery Act (RCRA). Specifically, the Agency is considering whether to regulate potential releases to air or groundwater, of hazardous constituents from surface impoundments treating wastes ..." (emphasis added). Eastman asks the Agency to add a specific statement to the applicability portions of the Phase m and IV LDR rules clarifying that they only apply to nonhazardous CWA impoundments. Also, Eastman suggests that the language in the second diamond in Figure 1, Option 2 be changed to read: "Is the Decharacterized Waste Managed in a Nonhazardous Clean Water Act or Equivalent Wastewater Treatment System(s)?"

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P080

COMMENTER EASTMAN

RESPONDER MC

SUBJECT EQUV

SUBJNUM 080

COMMENT C. Sludges Are Prohibited Only If They Are Themselves

Hazardous Under option 2 in the proposed rule, sludges removed from prebiological CWA surface impoundments that accept decharacterized hazardous wastes would have to meet UTS levels. Eastman believes that no additional controls for sludges are warranted for the following reasons. First, as the Agency has stated, controls for sludges residing in the impoundments, separate from controls that address impoundment leakage, are not needed. "...EPA does not believe in-place sludges would be a release pathway separate from the leaks pathway. Put another way, by controlling leaks (as explained in the previous section), any risks posed by sludges while in the impoundment should be accounted for." (60 FR 43673) Secondly, sludges represent a new point of generation when they are removed from the impoundment and are, therefore, subject to land disposal restrictions only if they are hazardous (exhibit a hazardous characteristic) at the time they are removed. (see Wow) "EPA also reiterates that, as a legal matter, it can be argued that even no treatment of sludges is equivalent to subtitle C LDR controls. This is because generation of sludges is usually a new point of generation at which the newly-generated waste is reevaluated to determine if it is subject to the LDR standards. If non-hazardous, the sludges would not be so subject (i.e., would not be prohibited wastes). See 55 FR 22661-62. Thus, literal application of an equivalence test would result in no treatment of these sludges, since the sludges will be non-hazardous wastes by definition (they cannot be hazardous wastes because they are being generated in subtitle D impoundment), and so would not require further treatment under the standard subtitle C approach." (60 FR 43673) As the Agency has properly recognized, sludges removed from a nonhazardous impoundment are not hazardous (because they were generated in a nonhazardous impoundment) unless they are determined to be hazardous (exhibit a hazardous constituent) at the point that they are removed. No land disposal restrictions attach to the removed sludges unless they exhibit a characteristic. In its Phase III discussion of sludges generated from the treatment of

characteristic wastes in CWA impoundments (60 FR 11709), the Agency says that "Under EPA's existing interpretations of the rules, such sludges are usually considered to be prohibited wastes only if they are themselves hazardous. This is because generation of a new treatability group is considered to be a new point of generation for purposes of determining where LDR prohibitions attach." In the initial proposed rule setting forth land disposal restrictions (LDR) the Agency recognized that the most effective and efficient way to develop treatment methods would be to divide wastes into treatability groups based on similar physical and chemical properties. See 51 FR 1677. The Agency recognized in this proposed rule that setting treatment standards on the basis of waste codes is not appropriate. "Because of the large number and variable nature of the waste within most EPA waste codes, it is usually not appropriate to evaluate treatment methods and their effectiveness on a waste code basis.... Waste may also be grouped according to the constituent properties since these properties influence waste treatability. For example, all waste containing volatile organic constituents may form one treatability group, while waste containing soluble organics may form another group. Other groups may consist of waste containing metals or cyanides." It follows from this position that in order to determine what treatment standards apply one must know what treatability group is involved. And the determination of a treatment standard can occur only after the treatability group is generated. EPA confirmed its use of treatability groups in making a determination of applicable restrictions in the final rule issued November 7, 1986, 51 FR 40572. In describing the sequence to be followed in determining LDR the Agency stated at page 40620: "Sequence 1 in the generator's decision-making process commences with a determination of the appropriate treatability group and corresponding Part 268 Subpart D treatment standard ... The Agency is requiring that applicable Part 268 Subpart D treatment standards for a restricted waste be determined at the point of generation." A statement that a change in treatability group creates a new point of generation is found in the final rule for land disposal restrictions for California list waste, 52 FR 25760 at page 25767, which in turn reiterated a statement found in 52 FR 22356 at 22357. In both instances the Agency explained an exception to the principal that treatment residues from prohibited waste must continue to be treated until they meet the treatment standard. As the Agency explains: "This is

where treatment results in a residue that belongs to a different treatability group than the initial waste and the Agency has already determined that there is inadequate nationwide capacity to treat the waste belonging to that group." As an example, the Agency described the incineration of an F001-F005 spent solvent that generates a scrubber water. Further treatment of the scrubber water is not required because ... this scrubber water belongs to a different treatability group ... It is obvious from this discussion that as the treatability group changes the determination of applicable land disposal restrictions changes also. It follows that since land disposal restrictions are determined at the point of generation (as described previously) then a change in treatability group is a new point of generation. See also 55 FR 22520 at 22544: "Additionally, this is in keeping with the general principle established in these rules that determination of whether a characteristic waste achieves BDAT must be reevaluated whenever a treatment residual is generated. Put another way, each new treatability group has a new point of generation for a characteristic waste." See also 53 FR 31138 at 31209: "Of course, if in the course of managing the waste a new treatability group is created, for example, scrubber water from the incineration of a nonwastewater, the treatment standard applicable to this new treatability group will apply." From the above it is apparent that from early on in the development of the land disposal restriction rules the Agency has emphasized both the concept of determining applicability of land disposal restrictions at the point of generation and the concept that treatment standards are based on treatability groups and that a change in a treatability group is a new point of generation. As EPA pointed out in the third-third rule, this approach to treatability group changes "provides a clear line of demarcation, avoids the enormous difficulties associated with determining new treatability groups every time a hazardous waste (in this case non-hazardous waste) is altered in some respect and avoids having an initial waste's status as prohibited determined in all cases by some later management of a residue derived from the initial waste". See 55 FR 2266. It is also apparent that the court in the third-third decision nowhere addressed the issue of a change of treatability groups or, for that matter the issue of treatability groups at all. Thus, EPA cannot rely on the court decision as a mandate to change its position on point of generation or treatability groups. If these changes are to be made they must be made on their own merits and

not as a requirement of the court.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P080
COMMENTER EASTMAN
RESPONDER MC
SUBJECT EQUV
SUBJNUM 080

COMMENT A. Option 1 Satisfies the Court's Mandate When Congress enacted RCRA in 1976, it recognized the pre-existence of several environment statutes including the Clean Water Act (CWA), and in section 1006(b) of RCRA instructed the Agency to integrate provisions of RCRA and other statutes when implementing RCRA and to avoid duplication, to the maximum extent practicable, with the provisions of those statutes. In the Third Third land disposal restriction (LDR) rule, EPA made a key policy decision consistent with Congress' directive when it determined that characteristically hazardous wastes were no longer regulated by RCRA once they lost their characteristic, thereby allowing decharacterized wastes to be managed in nonhazardous CWA treatment systems without having to meet the requirements of RCRA subtitle C. EPA's policy decision was challenged in *Chemical Waste Management v. EPA*, 976F. 2d 2(D.C. Cir. 1992). In this Third Third decision, the court said: "Although a surface impoundment is technically a form of "land disposal," and treatment therein normally would be at odds with the commands of RCRA, this approach is nonetheless acceptable because RCRA requires some accommodation with CWA. However, in all other respects, treatment of solid wastes in a CWA surface impoundment must meet RCRA requirements prior to ultimate discharge into waters of the United States or publicly owned treatment works ("POTWs") 976 F.2D at 20. Therefore, the court upheld EPA's accommodation of RCRA and the CWA by allowing continued use of nonhazardous CWA impoundments to treat formerly characteristic hazardous wastes. The court added only one qualifier to this accommodation, that the wastes meet RCRA requirements prior to discharge into surface waters or POTWs. EPA has addressed this requirement in the proposed Phase III rule where it proposed that treated effluent from a nonhazardous CWA system (managing decharacterized hazardous wastes) meet CWA technology-based or water quality-based standards, or the RCRA Universal Treatment Standards (UTS). This "end-of-pipe" treatment demonstrations fully satisfies the courts mandate. Nowhere in the Third Third decision does the court require, or even address, air emissions, leakage, or sludges. In the Third Third rule, EPA acknowledged

that the NPDES technology-based requirements of the CWA provide for treatment of wastewaters prior to discharge and that, indeed, many of the LDR treatment standards are based on data used to set the CWA standards. Therefore, the Agency concluded: "Thus, EPA believes the overlap of an LDR dilution prohibition where an NPDES treatment train includes a nonhazardous treatment impoundment would not substantially further the treatment goals of the land disposal restrictions." (55 FR 22657) Therefore, the Agency need not set any additional requirement other than the Phase m "end-of-pipe" treatment demonstration to meet the court's requirement or the intent of the land disposal program. In fact, to impose VOC, leakage, and sludge controls, beyond the end-of-pipe demonstration, would saddle nonhazardous surface impoundments with more stringent land disposal treatment demonstrations than are required of hazardous waste treatment units. The court did not intend or even suggest that EPA impose this additional burden on nonhazardous impoundments. When it rendered its decision, the court fully understood that the impoundments at question were nonhazardous CWA impoundments not subject to RCRA controls for-VOC emissions, leakage, or sludges. Yet, it did not specify that these issues need be addressed, only that a demonstration be made that hazardous constituents in the characteristic wastes be reduced prior to discharge to the same degree that they would be by other RCRA treatment. Again, this requirement is fully satisfied by the Agency's proposed Phase m "end-of-pipe" treatment demonstration. B. VOC Emissions, Leakage, or Sludges from Nonhazardous Impoundments Do Not Represent a Significant Threat to Human Health and the Environment In the Phase m proposed rule, EPA acknowledged that characteristic wastes treated in nonhazardous surface impoundments pose little risk. "That being said, the risks addressed by this rule, particularly UIC wells, are very small relative to the risks presented by other environmental conditions or solutions. In a time of limited resources, common sense dictates that we deal with higher risk activities first, a principle on which EPA, members of the regulated community, and the public can all agree." (60 FR 11704) The wastes at issue in this rulemaking are low-risk dilute wastewaters containing formerly characteristic wastes that no longer exhibit a hazardous constituent. Managing these wastes in CWA-permitted treatment systems insure that they are properly treated prior to discharge. The end-of-pipe treatment demonstration proposed in the Phase m proposal further insures that hazardous constituents

in the wastes have been treated. EPA has not adequately demonstrated that the residual risks associated with management of decharacterized hazardous wastes in nonhazardous CWA impoundments, after implementation of the Phase m controls, are sufficient to justify additional controls on sludges, VOC emissions, or leaks. Based upon very conservative generic risk assessments which did not include consideration of site-specific parameters, EPA concluded that leakage is likely to be of concern only from pre-biological treatment units and that risks from sludges are low for all industries for which data was available ("Regulatory Impact Analyses of the Phase IV Land Disposal Restrictions; August 7, 1995 p. ES-7). Eastman believes that the Agency's risk screening is flawed and that it overstates the risks associated with nonhazardous CWA impoundments. Eastman is a member of the Chemical Manufacturers Association (CMA). CMA commissioned Gradient Corporation to review EPA's risk assessment methodologies and conclusions. Eastman includes the Gradient study and CMA's comments on the risk assessment by reference in its comments. The CMA review showed that much of the data used in the Agency's risk screening is old, outdated, and not representative of current impoundment operations. Gradient found a number of problems with EPA's screening methodology and concluded that the Agency's estimates of risk are greatly overstated, in some cases by a factor of over 660. EPA has even publicly supported the premise that additional controls on CWA treatment systems are not needed. On July 20, 1995, Michael Shapiro, Director of EPA's Office of Solid Waste, testified before the House Subcommittee on Commerce, Trade and Hazardous Materials, in connection with a bill proposed by Rep. Oxley that would, among other things, reinstate much of EPA's Third Third Regulation. Mr. Shapiro described the Third Third rule as originally promulgated by EPA, and the decision of the D.C. Circuit in *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C. Cir. 1992) (hereinafter referred to as the "Chem Waste" decision), which forced EPA to modify the rules. He pointed out that the risks addressed by the resulting Phase m rule [and thus those addressed by the Phase IV rule as well "are small relative to the risks presented by other environmental conditions or situations; nevertheless, the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices." (Shapiro Testimony at 13, 14.) Published reports have indicated that Mr. Shapiro stated that he would not oppose the section of the Oxley bill that

would reverse the Chem Waste decision as to wastes managed in CWA systems or UIC injection wells. (Pesticide & Toxic Chemical News, July 26, 1995, at 13.). In March 1995, President Clinton promised to provide Congress with a list of "rifle-shot" legislative proposals that would "[f]ix provisions of RCRA which result in high cost while providing only minimal environmental benefits." The Administration has drafted two rifle-shot reform proposals. One proposes a return to the Agency's position prior to the Chem Waste decision, that is, a complete deferral to CWA regulations for decharacterized hazardous wastes managed in nonhazardous CWA treatment systems (Inside EPA, October 25, 1995, p.1). In light of the low risk posed by decharacterized hazardous wastes that are treated subject to CWA regulations and the Agency's consistent support for the policy decision (to defer to CWA regulations) that it promulgated in the Third Third rule, it cannot in good conscious impose additional costly burdensome regulatory requirements on CWA treatment systems. To do so would be totally inconsistent with the Agency's regulatory reform objectives. The Agency must recognize that many of the additional controls that it is contemplating will be very expensive to implement. Eastman alone could incur costs in excess of \$100 million dollars if it is forced to replace its CWA impoundments with tank systems. EPA has no justification for disrupting these long-standing wastewater treatment operations. Eastman agrees with the Agency's preambular discussion; our energy and capital funds could be much more productively used in other areas. Eastman urges the Administration to accelerate its rifle-shot legislative reform efforts. In the meantime, the Agency should adopt Option I in the Phase IV proposal. C. Air Emission, Leakage and Sludge Concerns Are Already Addressed By Other Statutes and Regulations Section 1006(b) of RCRA instructs the Administrator to avoid duplication, to the maximum extent practicable, with the appropriate provisions of other statutes. In the context of the Phase III and IV rulemakings, it is important not only for EPA to integrate the requirements of RCRA with existing CWA requirements, but that it also avoid duplication with existing federal, state, local and tribal statutes and regulations. Eastman believes that existing regulations are sufficient to adequately address air emissions, leakage and sludge concerns at nonhazardous CWA treatment systems. EPA need not, and should not, add duplicative controls on top of those that already exist. 1. Air Emissions Emissions of hazardous air pollutants are already subject to Section 112

of the Clean Air Act. Section 112 requires EPA to promulgate emission standards for industrial source categories with respect to nearly two hundred hazardous air pollutants, establishing Maximum Achievable Control Technology ("MACT") for such categories. Many chemical companies are already covered by the HON ("Hazardous Organic National Emission Standards for Hazardous Air Pollutants") regulation, promulgated on April 22, 1994 (59 Fed. Reg. 19402), or by the Benzene NESHAPS, promulgated on January 17, 1993. Another relevant NESHAP that has recently been proposed governs off-site waste management operations. These regulations, taken together, place stringent controls on the emission of hazardous air pollutants from the organic chemicals industry. MACT standards for other industrial categories have been or will be promulgated by EPA according to a statutorily-imposed schedule, including some 70 additional chemical production or manufacturing source categories and the organic liquids distribution source category. EPA is also required under section 112(f) of the CAA to review the residual risk after MACT controls are established as part of the overall program to control HAP emissions. This CAA-authorized program will address all emissions of HAPs, including MACT controls on HAP emissions from wastewaters generated from manufacturing operations. Since regulations promulgated under Section 112 are to cover all major sources of hazardous air pollutants, there is simply no need to impose duplicative requirements under RCRA. The provisions of the Clean Air Act governing nonattainment areas (CAA §§ 171-193) may also overlap with the proposed RCRA air emissions requirements. Those requirements impose limitations (including the use of Reasonably Available Control Technology, or "RACT") on the emissions from existing major air pollution sources in areas that have not attained established air quality standards. New or modified facilities may also be subject to several requirements: (a) for certain industries, EPA has promulgated New Source Performance Standards under Section 111 of the Clean Air Act, imposing specific requirements on all facilities within the industrial category; (b) for areas in compliance with air quality standards, Sections 160-169 of the Clean Air Act, governing Prevention of Significant Deterioration, require new or modified sources to install the Best Available Control Technology ("BACT"); or (c) for nonattainment areas, Sections 171-193 require new and modified sources to apply technology that achieves the Lowest Achievable Emissions Rate ("LAER"). EPA should defer to programs already in

place or scheduled for development under the CAA rather than generating separate regulations under RCRA authority. 2. Impoundment Leakage Leakage from impoundments are usually addressed under state water or solid waste authorities. For example, the Tennessee Water Quality Act requires the state to issue a permit for any activities that result in the discharge of sewage, industrial wastes or other waters into surfacewaters or groundwater, or from which it is likely that the discharged substance will move into surfacewaters or groundwaters (IN 69-3-108). Typically CWA surface impoundments employ completely mixed biological treatment such that the concentration of a contaminant in the impoundment and in any leakage is the same as that discharged in the effluent. Since any leakage from these units typically moves toward and discharges into nearby surface waters, and since the volume of leakage is small in comparison to the discharged effluent, no appreciable risks are typically associated with leakage beyond the risks addressed in the CWA permit for the effluent. Many CWA surface impoundments are located at RCRA-permitted or interim status TSDFs and are subject to RCRA 3004(u) or 3008(h) corrective action. Therefore, authority already exists to address leaks from Solid Waste Management Units (SWMUs) at these facilities. In addition, EPA has authority under RCRA 7003 to take action when a leak of any solid or hazardous waste may present an imminent and substantial endangerment to health or the environment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P080
COMMENTS COMMENTER EASTMAN
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COMMENT Thus, RCRA regulations are adequate to manage sludges from nonhazardous CWA systems. D. RCRA Land Disposal Rules Are Not the Right Mechanism to Regulate Nonhazardous Surface Impoundments Eastman has presented a number of reasons why it is not necessary to impose any additional controls on air emissions, leakage, or sludges. Nevertheless, if the Agency should determine that additional controls are necessary, they should be implemented under more appropriate Subtitle D authority. The impoundments at question in the Phase IV rule are nonhazardous impoundments managing nonhazardous wastes. The proper arena for implementing any additional requirements for these nonhazardous impoundments is through state industrial nonhazardous waste programs. III. Comments on EPA's Proposed Option 2 A. EPA Should Resist Adding the Administrative Burden That Option 2 Imposes Conceptually the approach proposed for addressing air emissions, leaks and sludges in Option 2 is reasonable in that it exempts facilities from additional controls where it is determined that adequate requirements are already in place. However, this option places additional administrative burdens on the Agency and regulated facility, to make that determination, even where adequate controls do actually exist. EPA should refrain from adopting Option 2, including this increased administrative burden, just because it may be more politically palatable. EPA should not fail to adopt Option 1 out of fear of being criticized for not taking any action. There are, as Eastman has previously discussed, adequate technical and policy reasons why the Agency can feel comfortable adopting Option 1 and restoring a measure of the RCRA/CWA accommodation that it promulgated in the Third Third rule. EPA has sufficiently addressed the court's requirements by its proposed Phase m "end-of-pipe" treatment demonstration. Nothing more is needed. B. If Option 2 is Adopted, Exemptions Should Be Broadly Defined As Eastman has said many times in these comments, it believes that EPA can, and should, adopt Option 1 (coupled with the end-of-pipe demonstration proposed in Phase m) to achieve the accommodation between RCRA and the CWA dictated by Congress and the treatment demonstration required by the Chem Waste decision. However, if for any reason EPA decides to adopt

Option 2, it is extremely important that the exemptions proposed in Phase IV be retained. Eastman believes that these exemptions should be written as broadly as practicable so that the Agency can avoid imposing duplicative, unnecessary requirements where federal, regional, state, local or tribal controls already exist. Eastman believes that the general exemption for units located at TSDFs and the exemption from air emission controls for facilities otherwise subject to federal, regional, state, local, or tribal requirements are especially critical.

1. TSDF Exemption - Eastman agrees with the proposed exemption from Phase IV requirements for impoundments located at TSDFs. Units, including nonhazardous CWA impoundments, located at permitted or interim status TSDFs are subject to RCRA corrective action under RCRA section 3004(u) or 3008(h). Any releases from these units are subject to investigation and potential corrective measures. EPA need not add any additional controls under the LDR program. Eastman believes that the diamond dealing with this exemption in Figure 1, Option 2 should be changed to read as follows: "Is the surface impoundment located at a TSDF which is subject to corrective action under RCRA 3004(u) or 3008(h)?"

2. De Minimis Exemption - Eastman believes it is appropriate to establish a de minimis exclusion from the definition of a hazardous waste for decharacterized hazardous wastes managed in Clean Water Act Systems consistent with similar de minimis provisions included in 40 CFR 261.3(a)(2)(iv). The establishment of such a provision would be consistent with EPA's stated goal of providing regulatory flexibility while recognizing the court's desire to avoid a wholesale disruption of existing CWA surface impoundments as long as hazardous constituents are adequately managed so as to assure protection of human health and the environment. 40 CFR 261.3(a)(2)(iv)(D) excludes de minimis losses of commercial chemical products or chemical intermediates (many of which contain high percentages of hazardous constituents) from the definition of a hazardous waste if the de minimis losses are combined with wastewaters for treatment in wastewater systems the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act. In addition, 40 CFR 261.3(a)(2)(iv)(E) excludes laboratory operations containing toxic wastes (and, therefore, hazardous constituents) from the definition of a hazardous waste if the generator meets certain conditions. The generator must demonstrate that laboratory wastes are discharged to onsite wastewater treatment facilities the discharge of which

is subject to regulation under either section 402 or section 307(b) of the Clean Water Act. In addition, the annualized average flow of laboratory wastewater must not exceed one percent of total wastewater flow into the headwork of the facility's wastewater treatment or pre-treatment system, or provided the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. In both cases, EPA recognizes the practical aspects of materials handling and laboratory waste generation and management activities while recognizing that insignificant contributions of hazardous waste do not measurably compromise the protection of human health and the environment. Eastman recommends that the Agency follow the precedent it set with the lab waste de minimis exclusion by excluding de minimis quantities of solid wastes exhibiting a hazardous characteristic from the definition of a hazardous waste if they are treated in CWA impoundments. This can be accomplished by adding the following at 261.4(b).

261.4(b)(15) Wastewaters which exhibit one of the characteristics of a hazardous waste defined in subpart C of 40 CFR part 261, provided, the generator can demonstrate that the wastewaters are treated in the facility's wastewater treatment or pretreatment system the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act and: (i) That the total annualized flow of the characteristic wastewaters does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment system or pretreatment system, or (ii) Provided that the combined average concentration of underlying hazardous constituents in the waste does not exceed one part per million in the headworks of the facility's wastewater treatment facility or pretreatment system.

3. Biological/Post - Biological Exemption for Impoundment Leakage and Sludge Controls - Eastman supports the proposed exemption from Phase IV leak and sludge control requirements for biological and post-biological impoundments but believes that it should be extended to exempt biological and post-biological CWA impoundments from additional air emission controls. From its risk screening evaluations, the Agency concluded that no significant health risks were associated with leakage from CWA biological and post-biological impoundments. "Our analysis also suggests that there is unlikely to be a significant difference in the risk reduction benefits between variants that consider all surface impoundments and

variants that consider only pre-biological surface impoundments. In the baseline risk analysis, we found that no significant health risks were associated with sampling points after the biological pond influent. These data indicate there are no incremental risk reduction benefits of leak requirements for post-biological ponds. Unfortunately, there are no direct measurements of constituent concentrations in biological ponds or in leaks from these ponds. If leaks from biological ponds contain concentrations that are dose to the effluent concentrations from these ponds, our analysis indicates that there would be no incremental benefits from requirements on biological ponds either." (Regulatory Impact Analysis of the Phase IV Land Disposal Restrictions and Summary of Data Needs for Phase IV Rulemaking, August 11, 1995, page 2 63) (emphasis added). As stated elsewhere in these comments, biological treatment units usually employ very thorough mixing so it is reasonable to assume that any leaks from the impoundment and the effluent from the impoundment will have essentially the same constituent concentration. Therefore, EPA's conclusion that neither biological nor post-biological impoundment leakage pose a health threat and that imposition of additional controls on these impoundments would result in no incremental environmental benefit is well founded. Similarly, the Agency concluded from its risk screening that requiring removal of sludges from biological and post-biological impoundments and treating hazardous constituents to UTS levels would result in no significant incremental environmental benefit. "In three of the four industries for which sludge data are available, we estimate there are no significant health risks associated with the baseline management practices (i.e., leaving the sludge in place or dredging and disposing without treatment). In the fourth industry, OCPSF, our results indicate there is a small reduction in health risks when OCPSF sludges are treated to UTS levels. When DAF 500 is used, there are potential health risks from one pre-bio sample under baseline management practices and after UTS treatment; however the risk posed is one order of magnitude lower after treatment to UTS. At the bio sampling point, treatment to UTS does not change the distribution of risks presented by the sludges. These results are reported in Exhibit 2-25. If these data are representative, the incremental risk reduction for sludges appears to be minimal. As a result, variants of Regulatory Alternative 2 that include the sludge requirements may have very little additional health risk

reduction benefits compared to variants that exclude sludge requirements. It is important to note, however, that only a very limited quantity of sludge data was available." (Regulatory Impact Analysis of the Phase IV Land Disposal Restrictions and Summary of Data Needs for Phase IV Rulemaking, August 11, 1995, page 2 63 and 2 64) (emphasis added). Eastman believes that the Agency risk screening methodology and underlying data are flawed and overstate the risks associated with CWA impoundments. Even so, the Agency's conservative-screening results fail to demonstrate that sludges in any CWA nonhazardous surface impoundments pose a significant risk or that imposing the proposed Option 2 sludge controls would result in any appreciable incremental environmental benefit, let alone justify the costs associated with implementing those controls. This lack of risk showing, coupled with the Agency's acknowledgment that any concerns over sludges residing in impoundments are adequately addressed by leak controls and the fact that sludges removed from a nonhazardous CWA impoundment represent a new point of generation to which no LDR requirements attach unless the sludge exhibits a hazardous characteristic, lead to the conclusion that no sludge controls for pre-biological, biological, or post-biological CWA impoundments are justified. EPA clearly should adopt Option 1, requiring no additional sludge controls.

4. Biological/Post- Biological Exemption for Air Emission Controls - Eastman believes that the Option 2 exemption from leakage and sludge controls afforded biological and post-biological impoundments should be extended to air emission controls. Eastman has used EPA's WATER 8 emissions model to estimate the potential air emissions from various parts of one of its large wastewater treatment systems. Eastman modeled the 46 organics that are included in its annual TRI report. This system is comprised of equalization and neutralization (pre-bio) conducted in tanks, aggressive biological treatment conducted in tanks (bio), and final polishing conducted in a CWA impoundment (post-big). While Eastman believes that this model is conservative and overestimates the magnitude of air emissions, it is instructive to compare the relative predicted emissions levels from the three types of units (pre-bio, bio, and post-big). This comparison shows that, for this Eastman treatment system, 77.7% of the total predicted organic emissions are attributable to the pre-bio units, while 22% is attributable to the bio units and only 0.3% to the post-big unit. In preparation for

implementation of the RCRA subpart CC rule, Eastman has determined the volatile organic concentration, using EPA method 25D, at various locations in this same treatment system. Specifically, samples from the influent to the pre-bio unit and the effluent from the bio unit were sampled every 15 minutes for three hours on February 22, 1995. These samples were sent to Research Triangle Institute, Research Triangle Park, North Carolina for analysis by EPA Method 25D. Results show that, while the total concentrations of volatile organics introduced to the pre-bio units ranged up to over 200 ppm, none of the samples collected at the effluent from the bio units contained detectable levels of volatile organics. Wastewaters in the biological units are well mixed so it is logical to assume that the measured effluent concentrations (non-detect) are reasonable approximations of the concentrations in the biological units. So, Eastman's data shows that the concentration of volatile organics in its bio and post-bio units are very low (non-detect). Therefore, the potential for volatile organic emissions from these units is immeasurably low. In Exhibit 2-24 of EPA's Regulatory Impact Analysis of the Phase IV rule (August 11, 1995, p. 2-62), the Agency lists the estimated baseline annual population risks attributable to organic air emissions for the eleven industry categories evaluated in the rule. The total estimated baseline cancer cases are 2.3-2.5 annually. Exhibit 2-24 also lists the estimated post-regulatory (after implementing Option 2 air emission controls) annual population risks. The total estimated post-regulatory cancer cases are 1.5-1.6 annually. In other words, the Agency has estimated that implementation of Option 2 organic air emission controls on all types of CWA impoundments (pre, bio, and post) will result in a reduction of .8 to .9 cancer cases per year. Eastman questions whether the Agency's risk assessment methodology is even precise enough to measure this small change with any degree of statistical accuracy, particularly when the Radiant study shows that the Agency's risk estimates related to air emissions are high by a factor of over 600. Eastman believes that the high costs of implementing subpart CC controls on CWA impoundments is totally unjustified relative to the very small reduction in risk that may be achieved. They certainly are not justified for bio and post-bio units. Eastman data shows that only 22.3% of the predicted emissions from its wastewater treatment system can be attributed to bio and post-bio units. Therefore, applying Option 2 air emission controls to these types of units, by EPA's own

estimates, would likely result in a reduction of less than 0.2 cases per year [(~ 8--9) x 22.3%]. EPA must not impose the costly Option 2 controls on these units with such meager, questionable benefits. 5. CAA Exemption - EPA has proposed to exempt CWA surface impoundments from the Option 2 air emission requirements if other federal rules already address VOC emissions. "To avoid duplication with other requirements, EPA would defer to other federal rules which establish controls addressing the same situations. Deferral would occur where the existing program addressed the specific UHCs of concern. In the case of air emissions. EPA would defer to standards regulating total volatile organics, as adequately covering air emissions of UHCs from this type of treatment. In addition to existing regulations, there are some CAA air emission limits under development. Inefficiencies and confusion could occur if Option 2 controls were applied and soon superseded by upcoming CAA standards. Facilities subject to CAA standards for hazardous air pollutants (in particular, those promulgated pursuant to CAA ~ 112) in the near future thus would not be covered by Option 2 air emission controls." (60 FR 43660) (emphasis added) Eastman supports this exemption. It is necessary to avoid the unnecessary overlap between statutes that Congress prohibited at RCRA section 1006(b). Eastman encourages the Agency to structure this exemption very broadly to include air exemptions not only for impoundments subject to federal CAA standards, but also to impoundments that are subject to constituent-specific or total VOC emission controls under regional, state, local, or tribal authorities. This exemption could be implemented simply by requiring the regulated facility to maintain in its operating record verification and a certification that its affected CWA impoundments are regulated for either specific-constituent or total VOC emissions. EPA should not limit this exclusion to a specific list of federal CAA regulations but, rather, should defer to any federal, regional, state, local, or tribal authority that specifically regulates specific-constituent emissions or VOC's from the affected impoundments.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land

Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P081
COMMENTS Rohm and Haas
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 081
COMMENT

Rohm and Haas is a world class manufacturer of methyl methacrylate (MMA), a monomer used in the manufacture of Plexiglas. This useful compound finds its way into automobile light lenses, floor polishes, laundry detergent, and numerous other consumer products. Rohm and Haas operates an integrated manufacturing facility for the production of hydrogen cyanide (HCN) and acetone cyanohydrin (ACH) as precursors to MMA and other products. The plant is located on the Ship Channel outside of Houston, Texas.

The HCN and ACH processes generate large volumes of waste water. Some of the waste water streams are hazardous at their point of generation because they exhibit the characteristic of corrosivity, and some of those hazardous waste streams contain low concentrations of cyanide (10 to 50 times the Universal Treatment Standards ("UTS") and ammonia. HCN is also used in the manufacture of various amines in the Primenes area. Some of the internal streams from the Primenes area are also characteristic for corrosivity and contain cyanides.

Most of the hazardous waste water from the units that manufacture or use cyanide-bearing materials is collected in one large tank identified as the 91357 Tank. The individual feed streams to the 91357 Tank have one thing in common - they have the potential to contain and must be treated to remove cyanide. Although the composition and characteristics of the individual waste streams may vary based on the operating parameters and the exact product manufactured, the composition of the waste in the 91357 Tank is relatively uniform over time.

From the 91357 Tank the aggregated waste water is fed to an ammonia and cyanide stripper. The cyanide and waste ammonia streams are destroyed in a flare, and the waste water, containing reduced levels of cyanide, is sent to the centralized waste water treatment plant. However, this treated stream may contain cyanide up to 10 times the UTS after treatment and before commingling. The waste water goes through API-type separators and pH adjustment, followed by aggressive biological treatment in a large, aerated, clay-lined surface impoundment. The treated waste water is discharged under a NPDES permit to the Houston Ship

Channel.

The NPDES permit contains specific limitations on the discharge of cyanide which, for both total and amenable cyanides, are greater than the UTS levels. The Rohm and Haas operation may be severely impacted if Phase IV sets standards for leaking, sludges and volatilization which the surface impoundments will not meet, even though Rohm and Haas is doing appropriate non-land based treatment for cyanide and is subject to Clean Water Act limits at the waste water treatment plant outfall.

Rohm and Haas strongly supports the promulgation of Option 1 Rohm and Haas strongly supports the promulgation of Option 1 as set forth in the proposed Phase IV rule. If the Phase IV Option 1 approach is adopted, Rohm and Haas expects to continue its operations and waste treatment as they are today and to address leaking, sludges and air emissions under the appropriate regulatory schemes. This is clearly Rohm and Haas preferred option.

Rohm and Haas has consistently stated that the LDR program is the wrong regulatory scheme to address the purported risks from waste water treatment plant effluent, and surface impoundment leaks, sludges and air emissions. Rather, the effluent should be addressed by the Clean Water Act (as proposed in Land Disposal Restrictions Phase III 60 Fed. Reg. 11702, March 2, 1995), the leaks should be addressed by corrective action and groundwater protection laws, sludges should be addressed by normal RCRA rules (with the removal of the sludge constituting a new point of generation), and air emissions should be addressed by the Clean Air Act. EPA should use this and every opportunity to halt the tendency of RCRA to encroach into all areas of health, safety and environmental regulation.

V. Option 2

Rohm and Haas believes that Option 2 as set forth in the August 22, 1995 proposed rule is too complicated, is overly restrictive, and creates too much uncertainty. The effects of Phase IV Option 2 are unclear at this point, largely because there are so many unanswered questions regarding the implementation details. At best, Rohm and Haas expects to spend \$25,000 - \$50,000 in initial costs and at least 100 hours of engineering and unit personnel time to determine and document the applicability of exemptions from the air emission rules. At worst, Rohm and Haas would be required to move its entire waste water treatment system into tanks, at an estimated cost of \$100million and a minimum five year time line for design and construction. This represents a major investment and

disruption for the Company with no corresponding environmental benefit. Therefore, Rohm and Haas urges EPA to adopt Option 1.

EPA should not regulate leaking and sludges from biological surface impoundments under the Land Disposal Restrictions. Rohm and Haas agrees that biological surface impoundments should not be subject to LDR regulations for leaking or sludges. These potential pathways are already adequately controlled by existing regulations and present low risks to human health and the environment. For example, groundwater monitoring in the vicinity of the Rohm and Haas impoundments at the Texas facility has not shown significant levels of organics from the surface impoundments. The operation of an activated sludge aerated surface impoundment precludes the accumulation of high concentrations of organics in the impoundment, and therefore there could be no leaking of harmful concentrations to the surrounding soil. Certain sludges from the Rohm and Haas impoundment have been fully characterized under RCRA and have been determined to be non-hazardous. These sludges are landfilled in a permitted and lined municipal landfill and present no threat to human health or the environment.

The air emissions rules in Option 2 would require Rohm and Haas to expend \$100 million with no benefit to the environment.

The largest impact of Phase IV on Rohm and Haas is likely to be caused by the proposed rules regarding air emissions from surface impoundments. In the event that Rohm and Haas does not meet any of the exclusions from the air rules (the lack of clarity of the air rules is addressed below) Rohm and Haas would be required to expend \$100 million to design and install a new tank-based waste water treatment plant. This effort would require a minimum of five years. The tank-based treatment plant would not be subject to the land disposal restrictions, so the RCRA air emissions rules would not apply. Instead, the Clean Air Act HON MACT standards for waste water would apply. Those same Clean Air Act rules will also apply to the air emissions from the existing impoundments.

Therefore, Rohm and Haas expects the regulation and the allowable levels of air emissions will be the same whether Rohm and Haas installs a new \$100 million tank-based system or uses the existing land-based system. In essence, the RCRA LDR air emission rules would simply force Rohm and Haas to spend \$100 million for no added benefit to the environment.

The installation of a cover over the impoundments as proposed in Phase IV is not feasible, and the only option Rohm and Haas would have for compliance would be the construction of a new tank-based

system. At the Rohm and Haas facility in Houston, Texas, a surface impoundment is used as an aeration basin for biological degradation of process waste water as required by the facility's NPDES permit. As detailed above, some decharacterized waste water

is also commingled with other process waste water. The aeration basin is irregularly shaped and approximately five acres in size with a nominal basin depth of eight feet. Twenty surface aerators supply dissolved oxygen to the aeration basin for biological oxidation of soluble organics in the waste water. The basin is located at the western edge of the property adjacent to property owned by another chemical manufacturer and occupied by storage tanks and other chemical process equipment. Rohm and Haas plant processes surround the basin on the remaining sides.

Estimated emissions from the basin are less than two tons per year (less than eleven pounds per day) based on modeling. Discharges of treated waste water from the facility are already regulated under the Clean Water Act (CWA).

The basin "cover" required under 40 CFR § 265 Subpart CC and incorporated into the proposed Phase IV regulations would not be technically feasible, let alone economically feasible, to construct at the Rohm and Haas Houston Plant for many reasons. First, it is not possible to design an air handling system which could supply the amount of oxygen needed for five acres of biomass in a covered basin. By design, natural air flow across the basin provides oxygen to the surface aerators and cooling to the basins. The surface aerators capture and disperse oxygen from the air into the basin water to continually replenish dissolved oxygen. A cover would stop the necessary air flow across the aeration basin which is critical for basin operation. Without oxygen, the microbial populations would not be able to process dissolved organics in the basin water and treatment efficiency would be significantly reduced so that it would no longer provide effective treatment.

Surface aerator operation and air flow across the basin also cool the biomass in the basin and prevent the microbial populations from overheating and expiring. Microbial action in the basin is inherently exothermic (i.e. heat is produced). This heat must be removed or the biomass will be unable to support the treatment efficiency required by the permit and the LDR Phase III. Heat exchanger or cooling towers could not be used to remove heat from the biomass in the basin without becoming fouled because of the characteristics of the aeration basin's contents. Without removal of excess heat, covering the basin would create a giant oven in which the microbial populations would be destroyed within a matter of days.

It is not possible to design an economical treatment system for the infinitesimally small amount of contaminants potentially present in the air after it passes over the basin and is captured

by a cover. Moreover, even if the basin could be covered, the blowers needed to supply critical air flow across the basin would likely generate significantly more air emissions than the limited air emissions currently produced by the aeration basin. Covering the basin would not be more protective of human health and the environment than the current treatment system.

There is insufficient available land area to support the structure for a cover. As noted above, the basins are landlocked. Without sufficient space for a support structure, a cover could not be built over the basins alone. A cover over the facility would necessarily cover parts of processes located on both Rohm and Haas and the adjacent property. That would create explosion or fire hazards and jeopardize human health and the environment.

The final reason a cover is not technically or economically feasible is that any modifications to the surface impoundment would require the entire production facility to be shut down. The plant cannot operate without facilities to handle and treat the 3.4million gallons per day of waste water. The facility does not have sufficient storage capacity to hold the process waste water during major modification to the aeration Basin. A shut down of this vital plant would be devastating to the entire North American operations of Rohm and Haas because the Houston plant manufactures most of the monomer that is used at other Rohm and Haas plants.

Therefore, the only technically feasible option for this facility would be to construct a totally new waste water treatment facility.

There is no justification for this expenditure given the fact that the current CWA permits already provide the necessary protection of human health and the environment.

Even if an exclusion applies so that the air emissions do not require controls, the costs and burdens of Option 2 would be heavy. Rohm and Haas would expect to expend \$25,000 - \$50,000 and at least 100 hours of engineer and unit personnel time over the course of six months simply to further statistically sample and analyze the characteristic waste streams, determine the treatment efficiency of the impoundments, evaluate the applicability of the exemptions, and clarify outstanding questions.

Rohm and Haas emphasizes that air emissions from surface impoundments should be addressed under the Clean Air Act rather than under the land disposal restrictions. Aside from high cost and limited environmental benefit, the LDRs will address only a tiny fraction of the potential sources of air emissions, namely the VOCs in deactivated characteristic waste containing underlying

hazardous constituents above UTS. By contrast, under the Clean Air Act, EPA would have jurisdiction to look at the total emissions from the impoundments, make a specific judgment about the overall threat to human health and the environment, and tailor the rules to the actual threats.

The definition of VO must be clarified

In the initial review of the proposed rule, Rohm and Haas has encountered difficulty in determining exactly what is a volatile organic ("VO") that would be covered by the rule. Specifically, the corrosive waste water generated at the Houston facility may contain hydrogen cyanide (HCN), other cyanide complexes, and amenable cyanide above the UTS at its point of generation. The waste water also contains ammonia. These compounds may also exceed 100 ppmw at the point of generation. Rohm and Haas believes these compounds are not VO s and would not be subject to Phase IV or Subpart CC but has been unable to confirm that understanding. Phase IV and Subpart CC give no assistance in determining whether HCN is a VO such that the waste water will be subject to the air emission rules. Subpart CC, 40 CFR § 265.1084(a)(5)(iv)(C), identifies Method 25D of 40 CFR Part 60, Appendix A as a method to measure VO concentration, but it does not identify what compounds should be measured by that method. Several of the air regulations, such as the HON, have lists of VOs, but they are not mentioned or referred to in Subpart CC or Phase IV. Rohm and Haas suggests that the list of VOs subject to the rule be clearly identified, and that HCN and ammonia should not be on that list.

EPA should clarify that the treatment efficiency of the impoundments need only be determined with respect to the LDR regulated constituents

Phase IV Option 2 would extend the Subpart CC to those impoundments that manage deactivated characteristic waste containing underlying hazardous constituents ("UHC") above the UTS and VOs above 100 ppmw at the point of generation. EPA SHOULD clarify that the surface impoundment treatment efficiency determination set forth in 40 CFR § 265.1083(c)(2)(iv)(A) only applies to the individual VOs that are contained in the deactivated characteristic waste that contains UHC above UTS. For example, at the Rohm and Haas Texas facility, assuming for sake of argument only that HCN is a VO, Rohm and Haas would only determine the treatment efficiency of the impoundments for HCN, and not for the methyl methacrylate or other organics that are contributed by non-restricted waste water from other processes. As written, Subpart CC would seem require the treatment efficiency to be

determined for every constituent that enters the impoundment, even those that are not contributed by restricted waste streams.

If EPA adopts Option 2, it must allow sufficient time for facilities to come into compliance

As stated above, if EPA finalizes Option 2 of the proposed Phase IV, Rohm and Haas expects to undertake a major construction project. This will require five years from the effective date to design and construct. Therefore, Rohm and Haas suggests that EPA allow the maximum possible time for compliance. Rohm and Haas supports EPA's proposal to allow an initial two years for compliance plus an additional two years capacity variance. Rohm and Haas has previously submitted a Request for a Case-by-Case Extension and would request EPA to review and approve that Request in addition to the four years that would be available under the Rule.

In the event that EPA decides to extend the RCRA Subpart CC air emissions rules to surface impoundments that are affected by Phase IV, Rohm and Haas suggests that the effective date of Phase IV air rules be postponed until after the uncertainty that currently surrounds Subpart CC is resolved. EPA has said that it will publish a substantive notice and afford additional opportunity to comment on Subpart CC, and EPA is also engaged in legal challenges to Subpart CC. Rohm and Haas further suggests that the effective date of Phase IV should be postponed until after finalization of the Hazardous Waste Identification Rule (HWIR) for process waste. That rule may exclude from Subtitle C standards some of the waste streams that are now identified as hazardous wastes.

VI. EPA Must Ensure It Has The Resources To Process A Large Number Of Treatability Variances

In the event that EPA does not adopt Option 1, EPA must be prepared to receive and process in a timely manner a large number of treatability variances. As described above, Rohm and Haas operates a sophisticated system that pre-treats its major characteristic waste stream before commingling in the centralized waste water treatment system. Rohm and Haas believes it can demonstrate that system constitutes the best demonstrated available technology for that stream, and is sufficient to meet the "minimize threat" levels required by CWM v. EPA. If the Land Disposal Restrictions Phase IV severely impacts Rohm and Haas operations, it may well file a request for a treatability variance in order to have its existing pre-treatment regimen declared

sufficient to meet the LDR and thereby be exempt from Phases III and IV. Considering the cost of upgrading impoundments or converting to tank based systems to meet Phase IV requirements, EPA SHOULD expect a great deal of generator interest in treatability variances.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P081
COMMENTS Rohm and Haas
RESPONDER SS
SUBJECT EQUV
SUBJNUM 081
COMMENT

In 1990 EPA promulgated the Third Third rule (55 Fed. Reg. 22520, June 1, 1990) that required the deactivation of hazardous waste prior to land disposal. In a centralized waste water treatment system subject to the Clean Water Act, this deactivation could be accomplished by means of dilution or commingling with other waste streams. Rohm and Haas believes that was the correct approach under the Land Disposal restrictions ("LDRs") and would support legislation that would return the program to the status quo prior to *Chemical Waste Management v. EPA*, 976 F.2d 2, cert. denied 113 S.Ct. 1961 (1992) (*CWM v. EPA*). Such a bill has recently been proposed in the House of Representatives, and Rohm and Haas urges EPA to actively support passage of a bill that would accomplish that goal. Rohm and Haas is considering communicating its support for this goal to its legislative delegation, and the likelihood of passage may be enhanced if EPA also demonstrates its support.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

The characteristic can be removed by any means, including dilution or other deactivation through aggregation of different waste streams preceding land disposal.

DCN PH4P081
COMMENTER Rohm and Haas
RESPONDER SS
SUBJECT EQUV
SUBJNUM 081
COMMENT

Rohm and Haas Company ("Rohm and Haas") hereby submits its Comments on the Land Disposal Restrictions Phase IV Proposed Rule, 60 Fed. Reg. 43654, Aug. 22, 1995 ("Phase IV"). As discussed in detail below, Rohm and Haas primary focus in these comments is the high costs and minimal benefit that will be realized by the air emission rules of the Phase IV proposal. Specifically, Rohm and Haas expects Option 2 of the proposed rule to require the expenditure of \$100 million for installation of a new tank-based waste water treatment system. However, that system will not be required to reduce air emissions below those of the current land-based system and will have limited benefit for the environment. This result is patently outrageous and should be avoided by adopting Option 1 as described in the proposed rule. Rohm and Haas appreciates the opportunity to participate in this rulemaking and would be pleased to discuss these Comments at EPA's convenience. Rohm and Haas is a member of the Chemical Manufacturer's Association ("CMA") and supports the comments submitted by CMA. Rohm and Haas is submitting separate Comments in order to emphasize issues of particular importance to Rohm and Haas.

RESPONSE:

The Agency notes the commenter's support for comments submitted by CMA. In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P085
COMMENTS EDF
RESPONDER SS
SUBJECT EQUV
SUBJNUM 085
COMMENT

2. Sludge Management

EPA's proposal would require treatment of the sludge prior to land disposal if any of the underlying hazardous constituents in the sludge exceeds UTS. However, EPA would allow reliance on generator knowledge, in lieu of sampling and analysis, to determine the concentration of contaminants in the sludge. See 60 FR 43675.

EPA offers no evidentiary basis for concluding facility owners/operators can determine sludge concentrations of all underlying hazardous constituents to the degree of precision necessary for determining compliance with UTS concentrations. EPA fails to offer such evidence because none exists- that level of precision cannot be reached for all relevant constituents without sampling and analysis. Therefore, the proposal is substantially deficient in this regard.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.

DCN PH4P085
COMMENTS EDF
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 085
COMMENT

Option 1 will simply maintain the status quo, and thus fail to establish the systematic and effective program needed to address the risks posed by the impoundments covered in this rulemaking. Existing federal and state requirements are grossly insufficient as a substitute for immediate EPA action.

While Option 2 is superior to Option 1, a series of unwarranted exemptions and a complete lack of emphasis on preventing groundwater releases substantially compromises its ability to protect human health and the environment. Option 3 is prematurely rejected by the Agency in the case of metals.

A strengthened Option 2 combined with prohibitions on metals in wastewater treatment system impoundments would constitute a meaningful response to the Chemical Waste Management decision. Under Option 1, EPA would rely upon the Phase III LDR rules addressing end-of-pipe discharges to comply with the Court decision in Chemical Waste Management. In effect, EPA would defer to existing programs which the Agency argues "tend to protect" against impoundment leaks, improper sludge management, and air emissions. See 60 FR 43659. However, even a cursory review of such programs indicates the absence of the comprehensive and effective controls necessary to meet the standard governing this rulemaking -- that the threat from decharacterized wastewaters are "minimized" pursuant to Section 3004(m) of RCRA.

First and foremost, the human health and environmental threats from decharacterized wastewater impoundment air emissions, leaks to groundwater, and improper sludge management are not systematically addressed at all under the Clean Water Act or any other federal environmental law. Indeed, "in reviewing EPA regulatory programs, the Agency determined that there was no existing or planned program specifically addressing leaks, sludges, and air emissions from surface impoundments accepting decharacterized wastes." Technical Support Document at 41.

Therefore, EPA attempts to justify Option 1 through a patchwork of existing programs that cannot possibly substitute for a meaningful outcome in this rulemaking. For example, EPA suggests since 42% of the facilities that would be affected are RCRA treatment, storage, and disposal facilities (TSDs) requiring a permit for

units other than the decharacterized

3 Effluent guidelines sampling and analysis data undergo technical review by the regulated community, and are subject to "strict" data quality assurance and quality control procedures administered by a Sample Control Center dedicated for this purpose. EPA Technical Support Document at 5-20, 5-21.

wastewater impoundments, reliance on Section 3004(u) of RCRA corrective action authority may adequately protect against groundwater releases. 60 FR 43659. This suggestion is absurd for at least the following reasons. First, if 42% are RCRA TSDs, 58% are not, so the Agency's Section 3004(u) argument is inapplicable to most of the facilities. Second, corrective action is not an adequate substitute for preventing environmental releases in the first instance, since the principle purpose of RCRA generally and the LDR program particularly is release prevention or minimization. Finally, Section 3004(u) of RCRA does not even require the monitoring of decharacterized wastewater impoundments to detect contamination, so identifying leaks will be unlikely. 4 EPA then observes some of the industrial sectors covered by this rulemaking are or will be subject to air emission control requirements promulgated pursuant to Section 112 of the Clean Air Act. While EPA is factually correct in this regard, other sectors will not be subject to air emission controls absent EPA action in the Phase IV LDR rulemaking. See 60FR 43660. Thus, significant air emissions will remain uncontrolled in the absence of the phase IV rules. 5

EPA fails to identify even one federal program addressing improper sludge management, and acknowledges 37 states lack any sludge requirements. 6 60 FR 43660.

In short, except in the case of air emission controls for some industrial sectors, there is no federal program that acts to prevent or minimize releases to air, groundwater, or land from either decharacterized wastewater impoundments or the disposal of the sludge accumulating therein.

Faced with little or no federal basis for Option 1, EPA then suggests state programs may form a basis for taking no action in this rulemaking, particularly with respect to impoundment leaks. In support of this concept, the Agency merely asserts 36 states have "some" regulations applicable to decharacterized wastewater impoundments, admittedly without an analysis of the nature or efficacy of those requirements. 60 FR 43660.

4 See the comments below on proposed Option 2 for additional

discussion on the inadequacy of relying upon corrective action authorities alone to comply with the Court of Appeals opinion, and on the shortcomings of deferring to Section 3004(u) authorities.

5 Where meaningful Clean Air Act controls are actually in place, it may be appropriate to defer to such rules, therefore EPA may still promulgate air emission controls in this rulemaking and avoid applying unnecessary and duplicative requirements. See discussion below on Option 2.

6 EPA notes it is "actively" investigating whether to list such additional wastes as hazardous, but this "active investigation" does not match the priority sectors covered in this rulemaking. In fact, EPA has no plans underway which commit the estimated \$1.4 million and 9.5 FTE necessary to undertake such listings over a 3-5 year period. See Attachment to letter from Robert Hickmott, EPA Assistant Administrator to Congressman Ron Wyden, November 3, 1995, at 4.

Presumably, this number "36" is derived from the recently released EPA study of state nonhazardous waste programs. The study includes a section on surface impoundment requirements, including design standards and groundwater monitoring, the cornerstone of an effective surface impoundment regulatory program.

According to the EPA study, only 26 states require "some form of liner" for any industrial waste surface impoundments, and substantially fewer require leachate collection systems. EPA State Program Report at 6. Therefore, EPA's own data indicates almost half of the states completely lack programs aimed at preventing or minimizing groundwater releases from industrial waste impoundments heretofore unregulated under Subtitle C of RCRA.

Significantly, a closer review of individual state programs reveals even less coverage for the surface impoundments at issue in this rulemaking. The Illinois design standards do not apply to onsite facilities, the Florida requirements apply only to impoundments handling landfill leachate, and the standards in New York and Colorado do not apply to facilities subject to Clean Water Act discharge requirements. *Id.*, Table 3. In addition, the Texas requirements are voluntary, and the state does not even perform an engineering review of a surface impoundment design. *Id.* See also Environmental Safeguards for Industrial Facilities need to be Developed, United States General Accounting Office, April 1990, p. 30. In South Dakota, Rhode Island, and South Carolina, grandfathering and other provisions likely exempt many of the impoundments covered in the instant rulemaking. Therefore,

the number of states with relevant design standards is no more than 18.

In the vast majority of the remaining 18 states, design requirements are applied on a case-by-case basis. EPA State Program Report at 9. EPA makes no attempt to evaluate whether the design standards would actually be imposed on the surface impoundments at issue in this rulemaking, and whether such design standards are adequate. For example, Maine is counted among the states with case-by-case liner requirements, but in fact Maine officials do not typically assess the need for liners or impose such requirements when processing permits for Clean Water Act wastewater treatment systems. Therefore, while states may possess the authority to prevent groundwater releases, EPA provides no evidence the authority is actually used, and used appropriately.

Similarly, according to the EPA study, only 28 states require groundwater monitoring for any industrial waste surface impoundments. EPA State Program Report at 8. Therefore, almost half the states completely fail to impose requirements to detect groundwater releases from industrial waste surface impoundments heretofore unregulated under Subtitle C of RCRA.

Again, a closer examination of individual state programs indicates the Illinois, Florida,

7 State Requirements for Industrial Non-Hazardous Waste Management Facilities, Office of Solid Waste, EPA, October 1995 (hereafter "EPA State Program Report").

Colorado, New York, South Dakota, South Carolina, and Texas requirements are inapplicable to the impoundments at issue in this rulemaking for the same reasons as the liner requirements. *Id.*, Table 3A. In addition, the Montana requirements apply to facilities not discharging to surface waters. *Id.* Moreover, grand fathering provisions may exempt decharacterized wastewater impoundments from groundwater monitoring requirements in New Mexico. Therefore, the number of states with relevant monitoring requirements is no more than 19.

In many of these 19 states groundwater monitoring requirements are imposed on a case-by-case basis. The observation above regarding states such as Maine not typically using available authorities applies with equal force to both liner and groundwater monitoring requirements. Therefore, while states may possess the discretion to impose certain requirements, there is no evidence in the record that the authorities are used, and used appropriately.

Furthermore, there is no evidence the requirements are properly enforced even when initially imposed. For example, New Hampshire is

counted as a state with groundwater monitoring requirements, but EDF is unaware of any regular inspection program applicable to the relevant impoundments in that state.

In summary, there is no factual foundation for Option 1. The Phase IV LDR rules provide the only opportunity for timely and systematic controls over non-surface water toxic contaminant releases from decharacterized wastewater impoundments.

Although Option 2 would establish a set of requirements for decharacterized wastewaters, the option as proposed contains numerous exemptions. In addition, the management standards themselves have important weaknesses, as discussed in subsection B of this section.

A. Proposed Exemptions

1. Secondary and Tertiary Impoundments

EPA proposes to exclude biotreatment and post-biotreatment impoundments from the management standards discussed below governing leaks and sludge management. The basis for the exemption is the allegedly "lower risks" posed by such impoundments. See 60 FR43660.

This generic exemption for leaks is inappropriate for several reasons. First, EPA proposed a second risk-based exemption for leaks discussed immediately below, based upon the concentration of toxic constituents in the impoundment wastewaters. A risk-based exemption taking into account actual constituent concentrations has greater validity and precision than the instant exemption based upon impoundment function.⁸ Accordingly, secondary and tertiary impoundments should be judged individually under the other risk-based exemption rather than generically excluded.

The importance of evaluating each secondary and tertiary impoundment is underscored by EPA's own sampling data. In the pharmaceuticals sector, the majority of biotreatment impoundment wastewater samples and facilities sampled exceeded a 1×10^{-5} cancer risk. In addition, at 60% of the facilities with post-biological treatment impoundment wastewater sampling data, the impoundment wastewaters posed a cancer risk greater than 1×10^{-5} . RIA, Exhibit 2-22.

Similarly, in the OCPSF sector, at half of the facilities with biotreatment impoundment sampling data, the wastewaters exceeded a 1×10^{-5} cancer risk level, and at 40% of the facilities the wastewaters exceeded a cancer risk of 1×10^{-4} . *Id.* Therefore, the function of the impoundment is not a reliable indicator of safety

on a generic basis.

Second, secondary and tertiary impoundments are not entitled to special status as a class in the instant rulemaking. While EPA correctly notes (at 60 FR 43663) that such impoundments are exempt from minimum technology requirements under Section 3005(j)(3), the Agency fails to acknowledge the more relevant provision of RCRA which does not exempt such impoundments from the land disposal restrictions program. See Section 3005(j)(1) of RCRA. Indeed, other impoundments may be used to treat restricted wastes without complying with minimum technology requirements (MTRs), but secondary and tertiary impoundments are not similarly authorized, presumably because the terms of the Section 3005(j)(3) exemption fail to ensure the impoundment contents will not leak into the environment. See 51 FR 40602 (November 7, 1986).

2. Risk-Based Exemption

EPA proposes to exclude from the requirements governing leaks those surface impoundments containing hazardous constituents below a trigger level. The proposed trigger level is 10 times the Maximum Contaminant Level (MCL) if the constituent has an 8 Option 2 is proposed by EPA as a methodology for distinguishing between treatment impoundments, and impoundments operating as both treatment and disposal units. See 60 FR 43657. A generic exemption based solely upon the method of treatment employed in an impoundment cannot possibly identify those impoundments also functioning as disposal units (i.e., treatment units that also leak), and is therefore inconsistent with the underlying rationale of the proposal.

MCL; if no MCL exists, then 10 times the state or tribal risk-based number; and in the absence of either an MCL or other risk-based number, the Universal Treatment Standard (UTS) becomes the trigger level. 9

While EDF does not oppose a properly constructed risk-based exemption, the terms of the proposal are substantially flawed in many respects. First, MCLs are not an appropriate basis for trigger levels in this context. MCLs are drinking water standards for public water supplies which may be substantially affected by irrelevant considerations such as the cost and technologies associated with public drinking water treatment systems. Moreover, MCLs do not apply to private water systems where water treatment may be unavailable, and protection of such private wells is a principal purpose of the RCRA program. The use of MCLs also fails to consider ecologic risks and potential human exposure routes other than groundwater ingestion. Accordingly, MCLs are not pure or

comprehensive risk-based standards, and are often based upon factors unrelated to whether wastewater contaminants would pose a threat to human health when released into the groundwater.

9 The Universal Treatment Standards are concentrations of over 200 toxic compounds that hazardous wastes must meet prior to land disposal. See 59 FR 47982 (September 19, 1994).

Significantly, for some hazardous constituents, the pure risk levels underlying the MCLs are exceedingly high. Approximately half

of the existing MCLs are for carcinogens, and the vast majority of those MCLs are set at levels exceeding a 1×10^{-5} cancer risk, including arsenic and other MCLs posing a greater risk than 1×10^{-4} .¹⁰ Therefore, both the variability between and the weakness of some MCLs precludes their use as valid risk-based numbers. Second, there is no evidentiary support in the rulemaking record or otherwise for a dilution and attenuation factor (DAF) of 10 in this context. Previous EPA modeling efforts employing a DAF of 10, such as in the delisting context, involved disposal in landfills.

As EPA readily acknowledges, the DAFs associated with surface impoundments are smaller than for landfills, thus the Agency's modeling probably understates downgradient contaminant concentrations. See 55 FR 11825 (March 29, 1990). Accordingly, if EPA utilizes 10 as the appropriate DAFs for delisting high volume landfilled wastes, a smaller DAF is necessary in the instant rulemaking.¹¹ Indeed, in a very recent letter to Congressman Wyden, EPA observes DAFs of 6 can occur at surface impoundments covered in this rulemaking. See Attachment to letter from Robert Hickmott, Assistant Administrator to Representative Wyden, November 3, 1995, at 3.

Third, EPA's proposal ignores the cumulative risks associated with multiple constituents leaking from the impoundment at the same time. Since the typical groundwater damage case involves the release of multiple contaminants simultaneously, and many of the impoundment wastewaters at issue in the instant rulemaking contain multiple constituents of concern (see 60 FR 43658-9), The Agency's proposed trigger levels substantially understate the risks posed by leaking impoundments. This failure to consider risks posed by the release of multiple constituents is contrary to EPA risk assessment policy in the RCRA program and elsewhere throughout The Agency. See e.g., 59 FR 66075 (December 22, 1994). Risks are also understated because of the failure to consider the additive impacts of exposure to background levels of contamination and/or other sources of contaminant exposure in addition to surface impoundment leaks. Therefore, EPA's proposed trigger levels are not based upon the true health risks posed by the groundwater releases.

Fourth, automatic use of a state or tribal groundwater protection number, without a minimal federal standard as to human health and environmental risks allowed by such a state/tribal number, fails to assure protection of human health and the environment or

compliance with the minimized threat standard underlying Section 3004(m) of RCRA. For example, Montana recently adopted a groundwater standard for arsenic consisting of the 1×10^{-3} risk level or the MCL, whichever is more stringent. As discussed above, even the more stringent of these standards does not adequately protect human health and the environment. For other carcinogens, Montana adopted a 1×10^{-5} risk level groundwater standard. Again, this dichotomy between arsenic and other carcinogens cannot be justified based upon considerations relevant to this rulemaking.

10 In addition, it is unclear whether EPA would deem the existing 15 ppb "action level" for lead an MCL for the purposes of this rulemaking. Such a course of action would be inappropriate, since the action level applies to first draw samples from the consumer's tap, and is used to trigger

a response by the drinking water system when exceeded in more than 10% of the taps tested. As EPA noted when promulgating the action level, it corresponds to approximately 5 ppb as an average lead exposure. 56 FR 26460, 26477 (June 7, 1991). In other words, the higher action level was designed to reflect the elevated concentrations experienced in first draw samples, so that overall lead exposures would not exceed 5 ppb if the first draw samples did not exceed 15 ppb. Therefore, at most, 5 ppb is the appropriate risk-based number for lead in this rulemaking.

11 Even if EPA presented evidence in the record supporting a DAF of 10 for surface impoundment wastewaters in either the delisting or HWIR context, the DAF of 10 is still inappropriate in this context because the "minimized threat" standard in Section 3004(m) governing the instant rulemaking requires a more stringent analysis than simply determining levels for classifying a waste as hazardous. As the Court held in *Chemical Waste Management*, the fact that a waste no longer meets EPA's definition of a hazardous waste does not necessarily mean The Agency has satisfied the minimized threat standard of Section 3004(m) of RCRA. Indeed, EPA must take action pursuant to Section 3004(m) unless EPA can demonstrate the risk from surface impoundment leaks is "minimal" for the wastewaters covered in the instant rulemaking. EPA cannot meet this evidentiary burden by simply borrowing DAFs from other portions of the regulatory - program where they are used for different regulatory purposes under less stringent statutory directives.

Fifth, the proposed adoption of the UTS number as the default "risk-based level" is inappropriate for both legal and policy reasons. Pursuant to Section 3004(m)(2) of RCRA, the UTS values

are intended to satisfy the minimized threat standard for wastes when land disposed in units meeting subtitle C design requirements -- multiple liners with leachate collection/leak detection systems, not the unlined surface impoundments at issue in this rulemaking. Moreover, the UTS represents the concentration of contaminants remaining after applying Best Demonstrated Available Technology (BDAT), thus it is not risk-based. Therefore, the release of contaminants into groundwater at UTS concentrations (or 10 times this level) cannot ensure protect human health and the environment and does not comply with the minimized threat standard governing this rulemaking. 12 The UTS number is neither relevant nor valid for this purpose. 13

12 Significantly, EPA does not even attempt the slightest demonstration in the record for this rulemaking that UTS numbers are adequate surrogates for meaningful health and environmental risk-based standards.

13 EPA's proposal regarding groundwater protection standards essentially acknowledges the irrelevance of UTS numbers as indicators of human health or environmental risks. The proposal requires use of MCLs, and where MCLs are unavailable, use of the background concentration as the groundwater protection standard. See 60 FR 43672. The use of UTS numbers as appropriate measures of groundwater contaminant risks is not even discussed by the Agency. It should also be noted that use of the MCL as a groundwater protection standard is inappropriate for the reasons provided above regarding the proposed trigger level. Sixth, annual sampling of the wastewaters is proposed to determine whether wastewaters qualify for the risk-based exclusion. No evidence is provided which would demonstrate annual sampling is sufficient to determine compliance, taking into account routine but significant variation in wastewater concentrations, particularly at batch plant operations. Significantly, EPA often requires weekly or monthly sampling under the Clean Water Act for the same industrial sectors and the same chemicals at issue in this rulemaking. For example, EPA recently proposed weekly sampling for toxic contaminants generated by the pharmaceuticals industry. See 60 FR 21657 (May 2, 1995). Discharge limits promulgated for the OCPSF sector are based upon daily maximum and monthly average limits. See 40CFR 414.91. See also 60 FR 5483 (January 27, 1995). If these sampling frequencies are necessary to ensure compliance with impoundment effluent standards, at least such frequencies are required to ensure compliance with concentrations applicable to impoundment inputs which may be subject to even greater

variation since they are often pre-treatment concentrations. Similar sampling approaches are especially appropriate in this context given EPA's desire to accommodate and integrate the RCRA and Clean Water Act requirements as much as possible.

3. Deferral to Clean Air Act Rules

EPA proposes to exempt impoundments from air emission controls in the instant rulemaking if Clean Air Act rules currently regulate VOC emissions from such impoundments or if CAA rules covering the impoundments are anticipated "in the near future." See 60 FR 43660. Insofar as EPA's proposal defers to Clean Air Act rules currently in effect which actually address the VOC releases from the impoundments covered by this rulemaking, the concept has merit. However, since EPA never defines what is meant by "in the near future," the aspect of the proposal regarding anticipated rules is extremely ambiguous. Any deferral applicable to CAA RULES which are not finalized prior to the effective date of the rules will delay control of the emissions in violation of the minimized threat standard governing this rulemaking. 14 As discussed further below, EPA's proposed effective date for the instant rules is contrary to law and sound policy. The appropriate national effective date is no later than two years from date of promulgation.

14 An exception may be appropriate for rules proposed but not yet finalized prior to the effective date, where the final rules are scheduled for promulgation within the coming year to 18 months, and the exception expires by the expected promulgation date.

4. Deferral to State/Tribal Programs

EPA proposes to defer regulation under the instant rulemaking if state/tribal programs control releases of hazardous constituents in a manner rendering Phase IV controls unnecessary. 60 FR 43661. With respect to the leak standards, EPA indicates it would defer to state/tribal programs that are "substantially similar" to the proposed requirements. 60 FR 43669.

Since no discussion is provided as to the scope of the requirements that may be deferred, the meaning of "substantially similar," the criteria for determining whether a state/tribal program meets this test, the process by which EPA would determine "substantial" equivalency, and whether the public would be provided an opportunity to comment on such a determination, this aspect of EPA's preamble cannot possibly constitute a concrete proposal ripe for public comment. However, EPA must bear in mind that if it wishes to develop a proposal along these lines, Sections 3006 and 3009 of RCRA explicitly reject reliance on state requirements less stringent than

comparable federal requirements, and expressly provide for public notice and participation in the state authorization process.

EPA CANNOT bypass these statutory provisions by calling its approval process a "deferral" rather than an "authorization."

5. Deferral to Section 3004(u) Regulations

EPA proposes to exempt from regulation the decharacterized wastewater impoundments at 42% of the affected facilities simply because those facilities require a Subtitle C permit for units other than the impoundments. EPA reasons the permit for the other units subjects the decharacterized wastewater impoundments to corrective action requirements pursuant to Section 3004(u) of RCRA. 60 FR 43659. Moreover, EPA (incorrectly) asserts if these facilities are currently in compliance with Subtitle C requirements for groundwater monitoring and corrective action, the monitoring and controls associated with air emissions, leak controls, and sludges provided in the instant rule for decharacterized wastewater impoundments would already be in place. RIA at 2-10.

However, as even a cursory review of EPA's rules indicates, Section 3004(u) requirements are not even remotely equivalent to the Option 2 controls. There are no monitoring requirements for either air or groundwater releases at decharacterized wastewater impoundments or any other solid waste management units. See 40 CFR 264.101. In fact, the only evaluation such units are required to receive consists of a desk top review of available information, and a visual site inspection. See 55 FR 30801 (July 27, 1990). Releases to the air and groundwater prior to the evaluations may remain undetected, and no ongoing monitoring of the unit is required after the initial evaluation is performed.

Furthermore, no threshold for controlling air emissions is established, and no standards governing air emission controls are imposed. In addition, no requirements apply to the management of sludge that may be removed from the unit. Therefore, the fact that an impoundment may be subject to Section 3004(u) authorities does not mean there are comparable air or groundwater monitoring requirements, air emission controls, or sludge management requirements under EPA's rules which would ensure equivalent Protection to the Option 2 controls.

6. Minimum Technology Requirements

EPA proposed exempting units meeting minimum technology requirements (MTRs) from all Option 2 requirements, including sludge management and air emission controls. See 60FR 43660. Yet mere compliance with MTRs accomplishes little or nothing to ensure

threats are minimized from the disposal of impoundment sludge or VOC air emissions. Indeed, Congress recognized these potential impacts by: (1) adding annual sludge removal as a condition of allowing the continued use of certain storage and treatment impoundments meeting MTRs; (2) linking the no migration standard for LDR exemptions to releases into any environmental media; and (3) requiring the promulgation of air emission standards for surface impoundments in addition to the MTRs and LDR program. See Sections 3004(g)(5), 3004(n), and 3005(j)(11)(B) of RCRA. Therefore, the proposed MTR exemption for sludge management and air emission controls lacks both a legal and factual foundation.

B. Management Requirements for Non-Exempt Units

1. Leak Controls

EPA's proposed leak controls consist entirely of groundwater monitoring and corrective action. While the proposed requirements contain significant shortcomings, the principal deficiency of the proposal is its failure to prevent or minimize groundwater releases into the environment. As EPA has acknowledged from the early days of the RCRA program, groundwater monitoring/corrective action provides a useful second line of defense in the event release control requirements fail, but such requirements rely upon complicated and uncertain predictions regarding contaminant fate and transport that do not provide an adequate margin of safety by themselves to protect fragile groundwater resources. See 47FR 32283-85 (July 26, 1982).

This need for release prevention was emphasized and incorporated into RCRA by the 1984 Amendments, particularly in the case of surface impoundments like those covered in the instant rulemaking. See Section 1002(b)(6),(7); 1003(a)(5). In the context of the land disposal restrictions program, only surface impoundments that are not leaking were authorized by Congress to receive for storage or treatment otherwise restricted wastewaters. See Section 3005(j)(11)(A) of RCRA. Accordingly, EPA's failure to incorporate release prevention/minimization into the Option 2 controls violates both the statutory land disposal restriction requirements and the underlying objectives of RCRA generally. The Agency proposal also violates the policy embedded in the Pollution Prevention Act of 1990 of encouraging pollution prevention and discouraging environmental releases.

EPA's failure to stress release prevention is all the more egregious because of the special challenges posed by releases of chlorinated solvents and other Dense Non-Aqueous Phase Liquids (DNAPL) compounds. The Agency's own policy directives stress the

unpredictable nature of these compounds in groundwater due to their insolubility and propensity for migration as a separate liquid phase moving across groundwater flow. 15 Leading groundwater scientists confirm the extraordinary difficulty associated with both monitoring the migration of DNAPLs and cleaning up releases once they are detected. 16 Some of the principal constituents of concern in this rulemaking are DNAPLs, including methylene chloride, chloroform, 1,2-Dichloroethane, 1,1,2,2-Tetrachloroethane, and carbon tetrachloride. 17 See RIA, Exhibit B-2.

15 See e.g., OSWER Directive 9283.1-06 (May 27, 1992); DNAPLs -- A Workshop Summary, EPA Office of Research and Development, EPA/600/R-92/030, February 1992.

16 See e.g., Pankow and Cherry, *Dense Chlorinated Solvents and other DNAPLs in Groundwater*, Waterloo Press, 1996, pp. 14, 15. 17 *Id.* At 4, 5.

Therefore, while reliance on groundwater monitoring and corrective action is inadequate by itself generally, it is particularly foolhardy in the case of DNAPLs because contaminant detection is extremely uncertain and restoration of the aquifer may not be possible using available remediation technologies. Allowing groundwater releases with a high probability that such releases may not be detected or remediated will not protect human health and the environment and cannot possibly comply with the statutory "minimized threat" standard governing this rulemaking. 18

18 The Agency also violated the Pollution Prevention Act when it failed to consider the impact of allowing additional releases of hazardous constituents into the environment, particularly DNAPLs, on otherwise available source reduction efforts. See 42 U.S.C. 13103(b)(2).

At a minimum, the Agency must incorporate into the leak controls a requirement which ensures that surface impoundments receiving decharacterized wastes are designed to prevent the release of hazardous constituents into the environment. EPA can accomplish this goal through a similarly drafted performance standard or minimum design specifications, or both. However, should EPA utilize a performance standard, a process must be created whereby unit designs are reviewed by regulatory officials to determine compliance with this standard and an opportunity for public participation in such review is provided.

In addition to the failure to emphasize release prevention, particular aspects of EPA's proposed groundwater monitoring/corrective action requirements lack merit. In some

cases, EPA adopts the Part 258 requirements without evaluating whether the underlying rationale for their adoption applies in the instant rulemaking.

For example, EPA proposed extending the point of compliance for monitoring groundwater releases and taking corrective action up to 150 meters from the surface impoundments, simply because that is the maximum distance allowed for municipal landfill monitoring systems under Part 258. See 40 CFR 258.40(d). In contrast, the relevant point of compliance for hazardous waste units is the edge of the unit boundary because early detection facilitates successful and cost effective corrective action, and reduces substantially the possibility the plume will migrate beyond the owner/operator's control. See 40 CFR 264.95; 47 FR 32285 (July 26, 1982).

In the case of municipal landfills, EPA promulgated the 150 meter provision because of the "unique characteristics of municipal landfills." The landfills are owned and operated by local governments with very limited technical and economic resources, and since the landfills are owned by local governments, potential groundwater use within the 150 meter radius of the unit can be controlled in perpetuity through local land use authorities. See 56FR 51068 (October 9, 1991). Neither characteristic of municipal landfills is factually relevant to the instant rulemaking, and as a matter of law, the owner/operator "practical capability" factor decisive to the Agency in the municipal landfill rulemaking under Section 4010 of RCRA cannot be applied in the instant rulemaking.

19 Instead, EPA is compelled as a matter of law and policy to establish the point of compliance at the waste management boundary. 19 EPA's finding that 42% of the facilities covered by the instant rulemaking are facilities requiring a Subtitle C permit illustrates that largely the same industries already regulated under subtitle C of RCRA are the principal industries affected by the instant rulemaking. These industries now comply with the Subtitle C point of compliance, and have substantial technical and economic resources available to meet RCRA standards. Therefore, EPA's appropriate "preference" for detecting contamination at the earliest opportunity is the only relevant factor for consideration in this proceeding. See 56 FR 51068 (October 9, 1991).

EPA also proposed adoption of the remedy selection criteria of Part 258, and self-implementation for all aspects of the groundwater monitoring/corrective action program, including but not limited to the selection of remedy at the site. Since the

remedy selection criteria in Part 258 include the "practical capability" of the owner/operator justified in that rulemaking solely due to the statutory provisions of Section 4010 of RCRA, the adoption of the same criteria in the instant rulemaking lacks a sound legal and factual basis. See 56 FR 50983, 51090 (October 9, 1991).

Moreover, EPA's twin rationales for the self-implementing aspects of the municipal landfill program governing corrective action were the difficulties associated with authorizing from scratch state municipal landfill programs in only a 24 month period, and the expectation of additional rules covering public participation with respect to both permitting and corrective action. See 56 FR 50995, 51091 (October 9, 1991). Again, neither rationale is relevant in the instant rulemaking since no further rules are contemplated, and EPA is required to administer the LDR requirements until states are authorized for the LDR revisions. Equally important, in the Subtitle C context, EPA has stressed the importance of both public participation and regulatory oversight in the corrective action process. See 55 FR 30834,30847-50 (July 27, 1990).

EDF urges EPA to review all the municipal landfill groundwater monitoring and corrective action requirements the Agency is considering applying in the instant rulemaking, compare those criteria to Subtitle C requirements, and revise the proposed requirements which reflect inapplicable statutory or factual bases. Significantly, EPA did perform such an analysis in at least one area, and concluded that monitoring for the regulated constituents covered in the rulemaking is more effective than monitoring for the indicator parameters specified in the municipal landfill rule. See 60 FR 43671. EDF agrees, and urges EPA to extend this analysis to other portions of the Phase IV rules as well.

In its proposal, EPA indicated facilities with existing groundwater monitoring and/or corrective action programs "may be able to continue those programs in lieu of the proposed regulations," even if such programs are not required by state or federal law and presumably were never reviewed or approved by regulatory authorities for efficacy or consistency with the upcoming regulations. See 60 FR 43669. Insofar as EPA contemplates deferring Option2 controls to inferior monitoring or corrective action programs already in place, such deferral violates Sections 3006 and 3009 of RCRA, and fails to protect human health and the environment. Deferral to a substandard program violates the Congressional purpose underlying Sections 3006 and 3009 of RCRA that minimum federal requirements are applied nationally.

EPA proposes to reject the conceptual approach of restricting the placement of wastes not amenable to treatment in Clean Water Act systems. EPA's rationales for rejecting this approach lack merit as applied to metals.

First, EPA argues restricting land placement is not necessary because promulgation of the Option 2 controls would protect human health and the environment. See 60 FR 43677. As discussed above, Option 2 as proposed would not protect human health and the environment. Of equal importance, even if Option 2 was strengthened by limiting exemptions and including design controls to prevent groundwater releases, two key purposes of RCRA are restricting land placement due to the "long-term uncertainties" associated with land disposal, and simultaneously encouraging source reduction as the preferred form of waste management. See Sections 1002(b)(7), 1003(b), 3004(g) of RCRA. The LDR restrictions were enacted by the Congress in addition to provisions related to strengthening minimum technology standards and groundwater monitoring/corrective action requirements. And exemptions to the LDRs were expressly crafted by the Congress to ensure mere compliance with the MTRs and other requirements did not undermine the congressional intent that land disposal would be severely restricted. 20 Therefore, it is inappropriate for EPA to equate the imposition of monitoring and cleanup requirements with the policies underlying the LDR program.

Second, the technical concerns EPA raises about expressly excluding certain types of wastes from biological treatment all relate to organic wastes. There is no disagreement about the inability of biological systems to treat metals, regardless of system type or waste feed variation.

According to a study prepared for the Environmental Technology Council, most metals and inorganic chemicals are not used by microorganisms thus they are not biodegradable, and the presence of metals can inhibit the proper functioning of wastewater biological treatment systems. 21 In addition, the Chemical Manufacturers Association retained a consultant to determine which compounds were amenable to biotreatment utilizing both literature sources and professional judgment, and no metals appear on that list. 22 Similarly, EDF is not aware of any evidence in the record linking the uncertainties of concern to EPA to metals.

Finally, EPA argues that by controlling the emissions and leaks, EPA can be reasonably certain that "treatment" in the impoundment is adequate. This argument is wholly without merit. Monitoring and cleaning up metal contaminant releases to groundwater

hardly ensures treatment within the impoundment. In fact, compliance with surface water discharge standards may be obtained through the accumulation of metal contaminants in the sludge and/or groundwater releases, not treatment prior to discharge.

20 See e.g., H. Rep. 98-198 Part 1, 98th Cong., 1st Sess. at 38 (1983)("The Committee does not intend that the Administrator circumvent the Committee's intent to restrict land disposal by simply imposing additional conditions on land disposal.")²¹

Evaluation of the Biodegradability of UTS Constituents in Industrial Wastewater Treatment Lagoons, JHE Technology Systems, Inc., April 1995, pp. 10, 11, Table 7.

22 See July 16, 1993 and September 8, 1993 letters with attachments from Cindy Bryck, CMA to David Case of ETC.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P085
COMMENTS EDF
RESPONDER SS
SUBJECT EQUV
SUBJNUM 085
COMMENT

2. Sludge Management

EPA's proposal would require treatment of the sludge prior to land disposal if any of the underlying hazardous constituents in the sludge exceeds UTS. However, EPA would allow reliance on generator knowledge, in lieu of sampling and analysis, to determine the concentration of contaminants in the sludge. See 60 FR 43675.

EPA offers no evidentiary basis for concluding facility owners/operators can determine sludge concentrations of all underlying hazardous constituents to the degree of precision necessary for determining compliance with UTS concentrations. EPA fails to offer such evidence because none exists- that level of precision cannot be reached for all relevant constituents without sampling and analysis. Therefore, the proposal is substantially deficient in this regard.

RESPONSE:

The issue raised by the commenter pertains to the sampling and analysis requirements that were proposed as part of Option 2 of the Agency's original Phase IV proposed rule (60 FR 43654) addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act. In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

NOTE to EPA: **Should this response also address methods and analytical precision for sludge matrices?**

DCN PH4P085
COMMENTS EDF
RESPONDER SS
SUBJECT EQUV
SUBJNUM 085
COMMENT

B. The Importance of this Rulemaking

At present, wastewaters that contain significant levels of toxic constituents are routinely managed in unlined, unmonitored surface impoundments that are not regulated under existing federal programs, and are largely unregulated at the state level as well. Though the contaminant levels do not trigger the hazardous waste toxicity characteristic (in large part because the characteristic only covers 38 chemicals), they are comparable to concentrations found in many listed hazardous wastes, as discussed below.

These contaminants can and do migrate both to air and groundwater. Significantly, many of the compounds found in these wastewaters include chlorinated solvents and other halogenated organic chemicals that, upon leaking from an impoundment, form a Dense Non-Aqueous Phase Liquid, or DNAPL. As 15 years of experience in the Superfund program has painfully shown, such releases "are, in general, exceptionally difficult to clean up," and can persist for decades or centuries.¹ In addition, DNAPL plumes can migrate in ways that are exceedingly hard to locate, thus plumes may unexpectedly contaminate wells used for drinking water or other purposes. To protect drinking water sources, the release of DNAPL compounds must be prevented.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to

determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P085
COMMENTS EDF
RESPONDER MC
SUBJECT EQUV
SUBJNUM 085
COMMENT

Several proposed generic changes to the LDR program lack merit, particularly eliminating the submission and review of generator sampling plans. Without such submissions, EPA and state agencies are largely dependent upon generator inspections to review such plans. Current and future generator inspection frequencies of about once every 25 years or less cannot possibly ensure generator sampling plans will produce valid LDR determinations.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P089
COMMENTS ASTSWMO
RESPONDER SS
SUBJECT EQUV
SUBJNUM 089
COMMENT

1. On the discussion concerning the different levels of treatment of primary versus secondary and tertiary, the usage of the term "treatment" is not as appropriate as the term "destruction." A case could be made that more treatment occurs in the primary ponds, as these concentrate more solids than the secondary and primary impoundments. Instead of comparing treatment, destruction of organic would be the distinguishing factor between primary, secondary and tertiary systems.

RESPONSE:

The Agency appreciates the commenter's offered analogy of the distinguishing differences across primary, secondary and tertiary systems. However, the Agency did not present its analogy of the differences between these three types of surface impoundments to spark debate regarding the exact types of treatment being conducted in each unit. The Agency was merely providing an overview of some potential differentiations among types of surface impoundments to help in distinguishing which impoundments most resemble permanent disposal. Using the commenter's suggested analogy, rather than that offered by the Agency, the same conclusions could be drawn.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such

regulation.

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8. The regulatory status of the decharacterized waste should be clarified. Many State agencies' ability to regulate a waste is based on RCRA classification. For example, if decharacterized waste was considered a Subtitle C RCRA waste, existing State law would not allow such waste to be disposed in Clean Water Act (CWA) surface impoundment systems.

RESPONSE:

The manner in which "decharacterized wastes" are regulated under any particular state regulatory program depends, in authorized states, upon how the state program defines the regulatory status of such wastes. In unauthorized states, such wastes must be managed in accordance to federal regulations.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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4. The fact that the air emission standards would require a membrane or a cover with ventilation to a control device is not practical. For example, in April 1991 in California, the San Joaquin Air Pollution Control District required similar controls for ponds from crude oil production. The regulated industry has not installed such controls, but has converted the storage of crude oil from ponds to tanks. Given that the economics of crude oil has a higher payback than wastewater treatment, one would not expect wastewater plants to retrofit their ponds to include covers or membranes to allow acceptance of higher VOC waste.
5. On page 43666, reference to Method 27 seems to be incorrect. Should it be Method 21?

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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COMMENT b. The Phase III and Phase IV rules should have a common effective date. FMC believes that significant disruption could arise if EPA establishes different effective dates for the Phase III and Phase IV rules. At the outset, it must be noted that the two rules are ostensibly part of the same effort, to determine what regulations to impose on decharacterized wastes placed in CWA surface impoundments. Having the two rules as separate proposals with separate but overlapping comment periods is already creating difficulties for industry. More importantly, however, serious problems could result if the Phase III rule is promulgated and made effective before the Phase IV rule is promulgated. On the effective date of the Phase III rule, companies will be forced to decide whether to continue to place decharacterized wastes in CWA surface impoundments, or to switch to other forms of management (such as tank-based systems). In many cases, because the new requirement to meet UTS at the point of discharge for constituents is not addressed in the NPDES permit, significant capital expenditures may be required in order to continue operating the surface impoundments. Additional treatment steps may have to be added, either in the impoundments or before them. In other cases, NPDES permits may be amended to add additional constituents, often requiring additional treatment steps as well. However, companies taking these expensive steps may discover later that the regulatory option ultimately chosen under Phase IV for cross-media contamination makes such treatment or permit limits impracticable or too costly. Furthermore, the particular combination of Phase IV requirements EPA chooses (if any) could determine the most cost-effective way to modify a CWA system to meet the new UTS requirements at the point of compliance. /21 EPA is considering three different options for Phase IV. Companies cannot adequately plan for compliance with Phase III without a decision by the Agency on which option (if any) will be chosen under Phase IV. In short, staggered effective dates for Phases III and IV would result in a tremendous waste of resources for companies, as well as significant confusion and difficulty in compliance. /21 If EPA chooses Option 3, essentially all of the affected surface impoundments will have to be replaced with

tank-based systems, because UTS will have to be met before wastes can be placed in the impoundments. If EPA makes that choice, any changes made within surface impoundments to allow UTS to be met at the CWA point of compliance would be wasted. If, on the other hand, the Phase III and Phase IV requirements are made effective simultaneously, companies will be able to make an informed decision about whether to retain CWA surface impoundments, and whether and how to modify them to comply with the new requirements. c. EPA has Authority under RCRA to Delay the Effective Dates of the Phase III and Phase IV Rules. Subject to court-approved schedules for developing the LDR and HWIR rules (which can, of course, be changed with leave of court) /22, EPA has ample authority to establish a common effective date for the Phase III and IV rules, and to delay that effective date until after promulgation of the final HWIR rule. First, the Phase III and IV rules are not new treatment standards or prohibitions subject to the immediate effective date under RCRA section 3004(h). /23 Section 3004 (h) provides that prohibitions from land disposal shall become effective immediately upon promulgation, and section 3004(m)(2) provides that treatment standards are to become effective "on the same date" as the corresponding prohibition. In the case of the wastes addressed in Phase III and IV, EPA has already promulgated the prohibition, in the Third Third rule. /24 Furthermore, EPA has already promulgated currently applicable treatment standards applicable to these wastes. /25 EPA has stated clearly that treatment standards are currently in place for these wastes, and that the Phase III and IV rules will merely amend these standards. /26 /22 In most cases, court-established schedules merely set the date for a final rule to be promulgated, leaving the effective date up to the Agency's discretion. /23 As explained in more detail below, the requirements contained in Option 2 of Phase IV would not be treatment standards at all. /24 40 C.F.R. §268.33 /25 40 C.F.R. §§268.41-43 /26 58 Fed Reg. 29863, 5/24/93 Accordingly, it is not possible for the Phase III and IV regulations to become effective on the same date as the prohibitions to which they will correspond, because those prohibitions occurred in the past. The statute does not say that amendments to treatment standards must be effective immediately, and there is no reason that they should be. /27 In fact, as noted above, EPA should ensure that the regulations do not become effective until after the HWIR rule is finalized. /28 /27 Clearly, the statute required prohibitions to be effective

immediately because Congress set stringent deadlines for promulgating prohibitions. RCRA sections 3004(d)-(g). Treatment standards were to be set on the same date so there would be no gap between prohibitions and the corresponding treatment standards. Here there will be no gap if the amended treatment standards are not effective immediately, because there are already prohibitions and treatment standards in place. /28 Nothing in RCRA Section 3006(g)(1) changes this conclusion. That section provides, in pertinent part: Any requirement or prohibition which is applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste and which is imposed under this subchapter pursuant to the amendments made by the Hazardous and Solid Waste Amendments of 1984 shall take effect in each State having an interim or finally authorized State program on the same date as such requirement takes effect in other States. Accordingly, while amendments to LDR treatment standards might arguably have to be effective in authorized states at the same time as in non-authorized states, there is nothing in this provision that states such amendments must be immediately effective in any states. Furthermore, the Phase IV rules, if Option 2 is chosen, would not be subject to the LDR timing requirements in section 3004 at all, because they would not be LDR rules /29 RCRA sections 3004(h) and (m) refer to "prohibitions" and "treatment standards." The requirements that are contemplated in Option 2 of the Phase IV proposed rule are neither one. The proposed requirements, addressing air emissions, sludges, and leaks from CWA wastewater surface impoundments, would be neither prohibitions from land disposal under Sections 3004(d) through (g), nor treatment standards pursuant to Section 3004(m). If there is any authority in RCRA for such requirements, /30 it does not come from the LDR provisions. The technical surface impoundment requirements in Option 2 of the Phase IV proposal are clearly not "prohibitions," because, as noted above, the hazardous wastes involved are already prohibited from land disposal. The proposed Option 2 requirements cannot be treatment standards, because they are not "levels" or "methods" of treatment as set out in section 3004(m) of RCRA. The Option 2 requirements would not be prohibitions or treatment standards, and thus are not subject to the LDR timing requirements in section 3004. /31 /29 Option 1, to rely on Phase 111 alone, would essentially mean that there would be no Phase IV requirements. Option III, to require UTS standards to be met

before placement in a surface impoundment, would supersede Phase III. /30 As discussed elsewhere in these comments in connection with the MSWLF standards, there in fact is no such authority anywhere in Subtitle C of RCRA. The Phase IV Supplemental LDR rule will be a new prohibition and treatment standard, and as such is required to be effective within six months of mineral processing wastes being listed or identified. Because the relevant six month period has already expired, the Agency clearly cannot comply with this requirement. As a result, the Agency should promulgate the rule at a time that makes sense from a policy perspective. In this case, that means that the Agency should issue the Phase IV supplemental date with an effective date after that of the HWIR rule. /31 If EPA believes that authority exists for the Option 2 requirements in some part of RCRA other than the LDR provisions, one remaining issue would be whether RCRA §3010(b) would require the regulations to be effective within six months of final promulgation of the rule. EPA has determined that it has the discretion to stay the effective date of RCRA rules where necessary (as with the Subpart CC rule, see 60 Fed. Reg. 50426 (Sept. 29, 1995)). If such a stay is not an option, however, EPA should delay final promulgation of the Phase IV rule until after the HWIR rule is promulgated. As noted above, EPA has sufficient authority and discretion to promulgate all four of the rules described above in an order that prevents waste and confusion. However, it should be added that EPA also has authority to grant National Capacity Variances under §3004(h)(2) for the Phase III, IV and IV Supplemental LDR rules so that the ultimate effective dates will fall after to the effective date of the HWIR. d. If EPA Fails to Promulgate the Rules Discussed Above in a Proper Order, Real Harm Will Result for Many Companies, Including FMC. If EPA promulgates the four rules discussed above in an unreasonable order (as described above), the confusion and unnecessary costs described above will be substantial, and will affect many companies, including FMC. The example of a single FMC facility illustrates the point. At its facility in Institute, West Virginia, FMC generates waste that has been newly listed as K157 in EPA's February 6, 1995 rule addressing carbamates. /32 The effective date for the listing was August 9, 1995. Currently, that waste is piped to a NPDES treatment system owned by Rhone-Poulenc. Rhone-Poulenc's system includes a surface impoundment utilizing aggressive biological treatment. FMC's contract with Rhone-Poulenc states that if new regulations cause

changes in the regulatory status of the wastes, Rhone-Poulenc can refuse to accept the wastes. FMC does not have sufficient space at its leased facility to construct its own wastewater treatment system, and the only alternative to Rhone-Poulenc's system would be shipment offsite by rail or truck. The Phase III proposed rule includes a land disposal prohibition and treatment standards for this carbamate waste, and the current proposal is for these requirements to go into effect 90 days after the publication of the final Phase III rule, while two-year national capacity variances are granted for other wastes. /32 60 Fed. Reg. 7824, 2/9/95 This situation creates a substantial dilemma for FMC. Rhone-Poulenc's wastewater treatment system does not currently satisfy the treatment standard for K157, and it would be extremely expensive to alter the system to meet that standard. From a purely technical standpoint, it is probably impossible to design, purchase the equipment needed, install and start up a tank based biological treatment system before the end of 1996. As suggested above, the only other alternative for FMC would be to ship the waste offsite for treatment elsewhere. FMC generates 2,350,000 gallons per year of wastewater that would have to be shipped offsite. This amounts to 130 railroad tank cars or 295 tank trucks. The disposal cost for this material would be \$242,000 per year and the transportation cost would be \$658,000 for a total of \$940,000 per year. To impose this tremendous expense for an interim period is clearly unreasonable. This is particularly the case where FMC believes that the upcoming HWIR rule is likely to remove this waste from coverage by Subtitle C of RCRA. It would be unfair and wasteful to require either extensive retrofitting or offsite shipment of a waste that is likely to become exempt from Subtitle C requirements within a short time. /33 Proposed 40 C.F.R. §268.39(a); 60 Fed. Reg. 11,742 While FMC believes that the problem at the Institute facility could be addressed with a national capacity variance, a better solution would be to defer the Phase III rule until after the HWIR rule. IV. EPA Should clarify That the Phase IV Regulations Apply Only to Subtitle D Surface Impoundments Receiving Decharacterized Wastewater. Both Subtitle C and D wastewater surface impoundments may receive decharacterized wastewaters. However, only Subtitle D surface impoundments should be impacted by the Phase IV regulations. This is consistent with the Court of Appeals in *Chemical Waste Management v. EPA*, 976 F. 2d 2 (D.C. Cir. 1992), cert. denied 113 S. Ct. 1961 (1993) decision which was directed towards

Subtitle D surface impoundments and not to Subtitle C surface impoundments. As the court stated, "Thus we agree with the EPA that, under RCRA, diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments which are part of an integrated CWA treatment train." /34 This applicability difference between Subtitle C and D wastewater surface impoundments is further acknowledged by EPA in Section I.C. of the preamble: /34 976 F 2d at 22 "Today's options to address surface impoundment releases specifically apply to Subtitle D (non-hazardous) surface impoundments that receive decharacterized wastes." /35

RESPONSE:

EPA promulgated the Phase III final rule on April 8, 1996. Prior to finalizing that rulemaking, EPA considered and responded to all public comments received in response to the proposed Phase III rulemaking. Whenever relevant, and as time and resources allowed, the In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Agency considered additional comments and data submitted by the public in response to the Phase IV rulemaking, prior to finalizing the Phase III standards. Given this, the Agency saw no need to delay the effective date of the Phase III rulemaking so that it corresponds with the effective date for the Phase IV rule.

Although the Agency cannot predict exactly how the constituent-specific exit levels for certain low-risk solid wastes in the HWIR final rule will compare with the UTS levels, the Agency did

consider available risk information when making decisions regarding final treatment standards in the technology-based LDR program. During the development of final treatment standards, the Agency examined whether the UTS for some metals may be far more stringent than any reasonable minimize threat level. The initial reasoning was that if the Agency found evidence that the final HWIR minimize threat level was likely to be much higher than the proposed UTS for any toxic characteristic wastestream, EPA would consider whether to raise the proposed treatment standard prior to finalizing the Phase IV rule. EPA examined the proposed HWIR exit levels for the toxic metal wastes including in the Phase IV rulemaking. When EPA compared the proposed HWIR exit levels to the UTS for each metal constituent, the Agency found that the BDAT level was, in most cases, within an order of magnitude of the proposed HWIR exit level. There were significant differences between the proposed HWIR exit level and UTS for two metals, _____ and _____. As discussed in section _____ of the preamble to the Phase IV final rule,.....[need to complete once preamble language is written]

In light of the differences in timing between the HWIR and the Phase IV final rule, there is too much uncertainty about what the final HWIR levels will be to incorporate those levels into the UTS for any constituents. Section 3004(m) of RCRA requires that the Agency promulgate treatment standards that specify levels or methods of treatment that "substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." The proposed HWIR levels have not yet been established as "minimize threat" levels. Therefore, EPA is promulgating the Phase IV rule and the HWIR rule independently. EPA will address any differences between the UTS and the HWIR exit levels either in the final HWIR rule or once both rules are promulgated.

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COMMENTS FMC

RESPONDER SS

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COMMENT a. The Regulatory "Trigger" for Groundwater Monitoring Using the UTS level Should be a Multiple Greater Than 1. The current proposal specifies that groundwater monitoring for a decharacterized surface impoundment will be required if the regulated constituent in the impoundment is greater than: (1) 10 times the Maximum Concentration Limit (MCL), or if no MCL exists, then (2) 10 times the State/Tribal groundwater protection number, or if none exists, then (3) The Universal Treatment Standard (UTS). /52 By using the UTS without a Dilution Attenuation Factor (DAF) multiplier on the surface impoundment, the Agency has failed to equalize the concentrations between the various values. As the Agency is aware, the UTS levels are likely to be significantly revised upon the promulgation of the HWIR proposal. This rulemaking is not final (and not even formally proposed) at this time. FMC believes it inappropriate for the Agency to base a proposal requiring the installation of a monitoring system upon values that have not been subject to notice and comment; there is no certainty for the regulated community in what the "trigger value" will be. This represents an unknown target for purposes of either commenting or compliance. It is impossible for the regulated community to either comment on this portion of the proposal because no values have been proposed, nor can the regulated community adequately plan the future compliance. If the UTS based upon HWIR is to be the trigger levels, FMC requests that EPA delay the final date (i.e., effective date of Phase IV) until after HWIR is final and proper notice and comment is made available; see comments in Section III. /52 60 Fed. Reg. 43669 Even if HWIR is published on schedule in December 1996, without changes to the values in the unpublished proposal, there is a six-month gap between when the existing values take effect and the new values are promulgated. It is uncertain what UTS values will be used by the regulated community as the basis for these values during the interim period. FMC believes that to alleviate this problem, EPA should either postpone this section of the regulation (until the HWIR values are final, the UTS is adjusted and adequate notice and comment is allowed on the Phase IV proposal) or similar to the MCL and

State/Tribal values include a multiplier (of at least 10) to the current UTS. b. The Regulatory "Trigger" for Groundwater Monitoring Should be Adjusted on a Site-Specific Basis The proposal for the regulatory triggers is based on a fixed Agency dilution factor "taking into account the reasonable dilution and attenuation that would occur." /53 Using the "one size fits all" approach defeats the general approach that EPA proposed taking in that the regulation should be self-implementing based on site specific conditions. FMC believes that the proposal should be modified to allow, on a site-by-site basis, that the affected location to be able to adjust the DAF, based on sound technical justification. This modification would be self-implementing with the Regional Administrator or Authorized State having the ability, after notification from the affected location, to readjust the DAF. This would be with no penalty for use of a higher DAF prior to Agency reconsideration. c. Statistically Significant Releases Should Not Require the Owner to Move Directly to Corrective Action. FMC believes that any corrective action measures should be based upon risk to human health and the environment and not result from a statistically significant increase over a fixed value. Even the evaluation of various remedial alternatives should not be done until a demonstrated threat to human health and the environment exists. The expenditure of time and effort by the regulated community to implement potentially unneeded corrective action measures is unwarranted. /53 60 Fed. Reg. 43669 The trigger for moving from detection monitoring should be based upon risk either through a site specific risk evaluation or through generalized values developed by EPA such as Preliminary Remediation Goals (PRGs) whichever the regulated facility chooses to use. PRO's have been developed by Region IX, San Francisco, CA, which can be made available to the regulated community.

RESPONSE:

The commenter's reference to the Phase IV ground-water monitoring requirements refers to requirements included in Option 2 of the Agency's original Phase IV proposed rule (60 FR 43654) addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act. In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in

question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENT EPA should specifically state in the final regulations that the Phase IV regulations for decharacterized wastewaters only apply to Subtitle D surface impoundments. V. FMC Supports Option 1 and is Opposed to Option 3. FMC believes that EPA should select Option 1 in the Phase IV rule. FMC believes that any further regulation of decharacterized land based waste units is better regulated under other Agency programs. As the Agency has stated in the Phase IV preambl³⁶, the Chem Waste decision specified that "...[the] court's opinion does not explicitly require more..." than meeting the UTS or CWA treatment standards at end-of-pipe. Discussion of the various options has satisfied any other additional requirements of the opinion and if the Agency believes it is necessary to further regulate these units under Subtitle C of RCRA, this can be construed as nothing more than regulation for regulation's sake. Additional regulations, if any, for decharacterized waste surface impoundments, to control releases from these units, would be better promulgated under the CWA, Clean Air Act (CAA), or RCRA, Subtitle D (for industrial units) rather than by LDR program. /35 60 Fed. Reg. 43657 /36 60 Fed. Reg. 45, 659, 8/22/95 FMC agrees with EPA that it is "unwise" to require decharacterized waste to meet the UTS before entering the surface impoundment as would be required under Option 3. This was clearly the court's intent in the Chern Waste decision. /37 Requiring industry to further treat decharacterized wastes (they have already been subject to some treatment to remove their hazardous waste characteristic) would add an unnecessary and undemonstrated burden on industry. In these times of global competitiveness, additional burdensome and unwarranted regulations cannot be justified. /37 976 F.2d at 23 (Noting that RCRA § 1006 requires accommodation with the CWA) VI. The Phase IV Rule Should Not Apply The Municipal Solid Waste Landfill Standards (MSWLF) To Clean Water Act Surface Impoundments. (Option 2) As part of Option 2, EPA has proposed to apply certain MSWLF standards under 40 CFR Part 258 to CWA surface impoundments receiving decharacterized wastes. However, RCRA does not authorize the Agency to promulgate such standards, and even if EPA had such authority, it should refrain from promulgating such standards as a matter of policy. a. EPA Lacks

Authority Under RCRA To Apply Municipal Solid Waste Landfill Standards To Clean Water Act Surface Impoundments. Under RCRA section 3004(m)(1), EPA is authorized to issue treatment levels or methods of treatment for prohibited wastes. The Municipal Solid Waste Landfill Standards are neither levels nor methods of treatment, and thus are not authorized under section 3004(m). Furthermore, because they would apply to units that are receiving no hazardous wastes, they are not authorized elsewhere in Subtitle C of RCRA. As explained elsewhere in these comments in connection with the Option 2 requirements in general, EPA's proposed use of selected Part 258 MSWLF standards is neither a treatment level nor a method of treatment. The MSWLF standards proposed for use in the Phase IV LDR rule concern groundwater monitoring and corrective action at Subtitle D surface impoundments. They do not set an acceptable level of constituents or provide a method of reducing constituent concentrations to acceptable levels. Indeed, the standards have nothing to do with the treatment methods employed in the surface impoundment. Accordingly, these requirements cannot be imposed as part of the LDR program. Furthermore, if the MSWLF standards cannot be imposed as LDRs, EPA lacks authority elsewhere in Subtitle C to impose the requirements, because they regulate Subtitle D units that do not receive any hazardous wastes. The Chem Waste decision /38 allowed EPA to impose certain continuing requirements on wastes that were no longer hazardous wastes (i.e., imposing Best Demonstrated Available Technology (BDAT) levels below the characteristic level) but only because of the special nature of the LDR program. Apart from the LDR program, EPA is limited to the regulation of hazardous wastes under Subtitle C. In *American Mining Congress v. EPA* /39, the court rebuffed EPA's attempt to expand its Subtitle C jurisdiction by broadening its regulatory definition of "solid waste." The court stated: "RCRA includes two major parts: one deals with nonhazardous solid waste management and the other with hazardous waste management. Under the latter, EPA is directed to promulgate regulations establishing a comprehensive management system. [42 U.S.C. § 6921] EPA's authority, however, extends only to the regulation of "hazardous waste." /40 /38 976 F.2d at 12-19 /39 *American Mining Congress v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987) /40 824 F.2d at 1179, See also *American Mining Congress v. United States Environmental Protection Agency*, 907 F.2d 1179, 1185 (D.C. Cir. 1990). The court went on to say that "[t]he very care evidenced by Congress in defining RCRA's scope

certainly suggests that Congress was concerned about delineating and thus cabining EPA's jurisdictional reach." /41 The surface impoundments being considered in the Phase IV rule are Subtitle D units that are part of CWA or CWA-equivalent systems. They do not accept hazardous wastes. EPA thus has no authority to regulate them under Subtitle C of RCRA. /42 /41 824 F.2d at 1189 /42 Furthermore, even if EPA could find general authority elsewhere in RCRA to impose the Option 2 requirements on Subtitle D units, it still could not lawfully do so because those requirements are not "necessary to protect human health and the environment." RCRA §§3002(a), 3004 (a). EPA has made it quite clear that it does not consider the Phase IV rules to be necessary -- indeed, it does not even consider the Phase III rules to be necessary. Although the D.C. Circuit rejected EPA's legal construction in the Third Third rule, the court did not disturb EPA's finding that further regulation of decharacterized wastes placed in CWA systems was unnecessary as a matter of policy and environmental protection. Accordingly, because the MSWLF standards cannot be applied to CWA surface impoundments as LDR requirements, and because there is no authority for the requirements elsewhere in Subtitle C, EPA is precluded from imposing these requirements as part of the Phase IV regulations.

b. Application Of The MSWLF Standards In Phase IV Is Inappropriate And Unnecessary Even if EPA believes that it has statutory authority to impose the MSWLF standards as part of Phase IV, it should decide not to do so, because imposition of the standards is inappropriate and unnecessary. First of all, use of modified federal MSWLF standards for CWA surface impoundments will add unnecessary complexity to the regulation of solid and hazardous wastes. It will mean that there will be one set of technical standards for Subtitle C units, a second set of federal standards for CWA surface impoundments accepting decharacterized wastes, and a third set of standards imposed by states under Subtitle D programs. This added level of regulation is particularly unnecessary when many states already have Subtitle D regulations in place that govern the same surface impoundments. For Subtitle D units, the double set of regulatory standards (LDR for decharacterized wastes and state programs) will add a level of complexity as to which regulation is applicable that will cause confusion both to the regulated community and the various federal and state agencies. Second, the MSWLF standards will create additional confusion and complexity because they are too dissimilar from other elements

of the LDR program. The MSWLF standards are not focused on treatment of particular wastes but are technical standards for landfill units. They raise entirely different compliance and enforcement issues. In addition, design and operational requirements for landfills and surface impoundments is quite dissimilar, further adding to the confusion. Third, imposition of the MSWLF standards is unnecessary because there are already substantial regulations and other legal requirements in place to address leaks from CWA surface impoundments. In addition to the state Subtitle D regulations referred to above, there are already RCRA regulations in place that address potential leakage at CWA impoundments. At RCRA-permitted or interim status TSDFs, the RCRA corrective action requirements apply to all SWMUs, including CWA surface impoundments. /43 Furthermore, the statute allows EPA to take action when management of any solid or hazardous waste "may present an imminent and substantial endangerment to health or the environment." /44 Clearly, this provision could be invoked to prevent such endangerment resulting from CWA impoundment leaks. In addition, all owners and operators of surface impoundments have powerful incentives to prevent leakage of hazardous constituents, because of the risks of Comprehensive Environment Response Cleanup and Liability Act (CERCLA) liability and the tremendous costs that can result /45, as well as the risks of common law tort liability resulting from leakage of toxic constituents. Finally, as the Agency has conceded, the risks presented by decharacterized wastes in CWA impoundments are low. In the original Third Third rule, EPA determined that once a characteristic waste no longer exhibits any hazardous characteristic and it is either (i) treated in a wastewater treatment system regulated under the CWA, or (ii) disposed of in an underground injection well regulated under the Safe Drinking Water Act (SDWA), then imposing additional treatment requirements under RCRA is unnecessary as a matter of law and unwarranted as a matter of environmental policy. /46 EPA determined that the CWA regulatory program already imposes adequate treatment requirements and dilution restrictions on industrial wastewater treatment systems. /47 EPA's reasonable approach was rejected by the court in the Chem Waste decision. /43 For the scope of EPA's enforcement power with respect to corrective action, see the recent consent decree in U.S. v. Eastman Kodak Co., No. 94-CV-6503T (W.D. N.Y.) /44 RCRA §7003 /45 42 U.S.C. §§9606, 9607 /46 55 Fed. Reg. 22, 656-59, 6/1/90

/47 See, e.g., 55 Fed. Reg. 22,651-52,22,656-57 In the Phase III proposed rule preamble, EPA pointed out that the Chem Waste decision was forcing EPA to address risks that did not justify Agency action from a policy perspective: "First, the risks addressed by this rule . . . are very small relative to the risks presented by other environmental conditions or situations. In a time of limited resources, common sense dictates that we deal with higher risk activities first, a principle on which EPA, and members of the regulated community, and the public can agree. Nevertheless, the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices during the next two years, although there are other actions and projects with which the Agency could provide greater protection of human health and the environment." /48 Similarly, OSW Director Michael Shapiro testified before the House Subcommittee on Commerce, Trade and Hazardous Materials on July 20, 1995, that the risks addressed by the Phase III rule (and thus those addressed by the then yet-to-be proposed Phase IV rule as well) "are small relative to the risks presented by other environmental conditions or situations." In a recent letter from Robert Hickmott (Associate Administrator USEPA) to U.S. Rep. Ron Syden, EPA confirmed that the risks are low, and that there is little data showing risks. Given these small risks, it is unreasonable to impose the significant costs on industry that would result from application of the MSWLF standards on CWA surface impoundments. /48 60 Fed. Reg. 11704 c. EPA Should Not Impose MSWLF Requirements Without Also Including The Variance Provisions In Part 258. If EPA decides, despite the arguments outlined above, to impose the MSWLF standards on CWA surface impoundments, FMC strongly urges the Agency to apply the same variance provisions that are found in Part 258. EPA has indicated that its preference is to make the standards self-implementing, and requests comment on how to deal with provisions that are not self-- implementing in Part 258, such as the multi-unit provision. /49 FMC believes that all such provisions allowing for variances and exceptions should be included, and should be made self-implementing to the greatest degree possible. Particularly considering the low risks that would be addressed by any such standards, the regulated community should be afforded the maximum possible flexibility in applying the standards. VII. If Option 2 is Selected, then the MSWLF Standards Must be Further Modified to Better Reflect Industrial Unit Operations and Requirements If the EPA decides

to pursue this option, revisions to the MSWLF standards /50 beyond those expressed in the Phase IV preamble /51 are needed. However, it is extremely difficult, if not impossible, to comment on the specifics of Option 2 without the proposed regulatory language. /49 60 Fed. Reg. 43671 /50 40 C.F.R. §258 /51 60 Fed. Reg. 43666-73

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P091
COMMENTS FMC
RESPONDER MC
SUBJECT EQUV
SUBJNUM 091

COMMENT d. Corrective Action Should be Based Upon Risk and a "No Action" Alternative Should be Allowed. The EPA proposal, in the Selection of Remedy section (adopted from 40 CFR 258) /54, requires that the owner/operator select a remedy that meets several protectiveness standard /55 and that the facility either cease discharge of decharacterized wastewater to the impoundment or install a double liner system. The protectiveness standards are not based on risk nor do they include a "No Action" alternative. FMC believes that it is particularly important that there be an opportunity for a decision of no remedial action, pursuant to 40 C.F.R. §258.57(e), because in many cases such a decision will be appropriate for a particular site and will prevent wasteful expenditures on unnecessary remediation activities. /54 60 Fed. Reg. 43671-72 /55 ibid Similar to FMC's comment on statistically significant releases (see item c. above), any corrective action selected should first be protective of human health and the environment. This can only be demonstrated through a risk analysis of the release and the various protective measures being contemplated including No Action. No Action is a plausible scenario, for example, where the natural groundwater quality makes it unfit for human/animal consumption, or the rate and direction of groundwater movement is such as not to represent a threat, or where, due to natural attenuation, the groundwater is not a threat at the property line. This is especially true where the Agency has already stated that the waste in question, prior to any treatment in the impoundment, represents only a small threat to human health and the environment. FMC requests that EPA specify that any remedy selection be based on a risk evaluation and that an alternative to corrective action include the No Action alternate. Further the No Action alternative, if selected, should include the continued use of the surface impoundment without modification e. EPA Should Grant a General Applicability Exemption for Subtitle D Impoundments that Receive Stormwater. Numerous industrial facilities utilize integrated sewer systems in which both process wastewaters and stormwaters are managed in the same collection system. Surface impoundments are commonly used in

integrated sewer systems to temporarily receive excess water flow during storm events. These impoundments can include both stormwater and firewater. Firewater ponds are used to store water for use in fire emergencies and are normally maintained at relatively high levels. Water (or excess water from firewater ponds) diverted to these units during storm events are either transferred to the wastewater treatment system at controlled rates or, if sufficiently clean, allowed to discharge to the receiving body. FMC's Bayport, TX facility discharges its combined process water and stormwater to Gulf Coast Treatment facility (POTW). FMC collects all its stormwater (non-hazardous) from its process area in the process sewer prior to discharge. This is combined with the plant's process water in a process water tank. One stream, a city water deionizer regeneration stream, is characteristically hazardous due to corrosivity at the point of generation (if the Point of Rejection from the process rather than the headwork to the wastewater treatment system is used as the Point of Generation) but is neutralized prior to discharge. During heavy storm events, Gulf Coast discontinues taking FMC's discharge. Since the storage capability is minimal, and the amount of storm collected water can be quite large, the current procedure is to overflow the process water tank to the firewater system and pond. Any excess water is then discharged after Gulf Coast begins receiving water again. This is an infrequent occurrence but without an exemption as proposed, FMC's firewater system would be subject to the Phase IV requirements. The cost to separate out this stream and build separate tankage is not warranted by the environmental risk it represents. FMC believes that these impoundments should be exempted due to their low environmental risk, their importance to the operation of the facility's wastewater management system. and for existing systems, the impracticality of closing the impoundments. Stormwater and firewater impoundments pose an inherently low environmental risk since: Underlying Hazardous Constituents (UHCs) in the influents to these impoundments have the potential to exceed UTS only for very short periods of time. Such exceedances will only occur during the very beginning and end of the storm events when the proportion of process wastewater to stormwater is at the greatest. The UTS levels will not be exceeded during the majority of the time when the flowrate of water to the stormwater impoundment is at the greatest. Thus, the flow-rated average concentration of UHCs in the influent will be

significantly below the UTS levels. Stormwater impoundments are generally empty, so the residence time of the UHCs is short. Thus, the already diluted UHCs will have only a relatively brief time to cause any penetration into the underlying soil (low potential for ground water contamination) and to generate any emission to the atmosphere (low, intermittent exposures to down wind receptors). Stormwater and firewater impoundments are important units to the facility's wastewater management system since temporary storage during storm events is necessary so that the large amounts of water managed during a storm event will not overwhelm the waste treatment system and interfere with the efficiency of the treatment system. It is impractical to close firewater or stormwater impoundments since: It would be prohibitively costly to close them because of their sheer size (greater than 25 acres at some facilities). Closure would entail one or more of the following: - Replace the impoundments with a vast storage tank system to manage the large volume of fire/storm/process water. One inch of rainfall over a ten acre facility is equivalent to 270,000 gallons of stormwater. During a major storm event, such as four inches of rainfall' this represents 1,000,000 gallons of stormwater. - Significantly enlarge the capacity of the wastewater transfer system downstream of the point where stormwater is currently diverted to the impoundments AND significantly enlarge the treatment system capacity to manage peak flows that will only occur during storm events. - Segregate the process wastewater from stormwater which, in many cases, would be prohibitively expensive due to the size and location (under operating units) of sewer systems in well-established industrial complexes. Thus, FMC believes EPA should grant a general applicability exemption for firewater and stormwater impoundments that receive decharacterized wastewaters. f. EPA Should Not Regulate Non-Hazardous Sludges Removed From CWA Surface Impoundments In The Phase IV Rule. FMC believes that it is both unlawful and unnecessary for EPA to impose additional regulations on sludges as part of the Phase IV rule. First, it is unnecessary for EPA to impose new regulations on sludges removed from CWA impoundments in order to ensure that treatment in such impoundments is equivalent to RCRA treatment. When sludges are removed from surface impoundments, they are newly generated wastes at a new point of generation, just as is the case with sludges removed from Subtitle C units, including tanks. /56 EPA's own discussion in the preamble conclusively shows that

sludges from CWA impoundments need not be further regulated to achieve equivalent treatment: "EPA also reiterates that, as a legal matter, it can be argued that even no treatment of sludges is equivalent to subtitle C LDR controls. This is because generation of sludges is usually a new point of generation at which the newly generated waste is reevaluated to determine if it is subject to the LDR standards. If non-hazardous, the sludges would not be so subject (i.e., would not be prohibited wastes). See 55 FR 22661-62. Thus, literal application of an equivalence test would result in no treatment of these sludges, since the sludges will be non-hazardous wastes by definition (they cannot be hazardous wastes because they are being generated in subtitle D impoundments), and so would not require further treatment under the standard subtitle C approach." /57 In other words, the LDRs never attach to non-hazardous sludges, because they are newly generated wastes. /56 60 Fed. Reg. 43673 /57 ibid Second, as with the MSWLF standards discussed above, regulation of nonhazardous sludges from CWA surface impoundments would be neither a prohibition nor a treatment standard under RCRA section 3004(m)(1), and thus EPA lacks authority to regulate such sludges under the LDR program. Furthermore, because the sludges are not themselves hazardous and are being removed from Subtitle D units that do not accept hazardous wastes, EPA is without authority to regulate them under any other portion of Subtitle C. Before sludges are removed from the surface impoundment, they do not pose risks different from those potentially posed by leaks, and are thus would be addressed by leak prevention measures. As EPA says, "EPA does not believe in-place sludges would be a release pathway separate from the leaks pathway." /58 Thus, EPA should not address sludges as a separate issue in the Phase IV regulations, for both legal and policy reasons. /58 60 Fed. Reg. 43673

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P092
COMMENTS Union Carbide Corp.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 092
COMMENT

I.C. The phase IV wastewater landban rules should not apply to subtitle C impoundments receiving decharacterized wastewater. The preamble statement "Today's options to address surface impoundment releases specifically apply to Subtitle D (nonhazardous) surface impoundments that receive decharacterized wastewaters)" (page 436457), implies that the phase IV rule would not apply to Subtitle C impoundments. EPA should make this explicit in the final rule. In particular, the following types of subtitle C surface impoundments need not be subject to the phase IV wastewater landban standards because they are already subject to subtitle C controls:
impoundments operating under 265.113 (d) and (e), delayed closure provisions
impoundments which have received a 3005(j)(3), aggressive biological treatment variance

I.G. Union Carbide Supports Option 1

Union Carbide agrees with EPA that this rulemaking will achieve little risk reduction for the effort involved. In particular, there would be no significant risk reduction at Union Carbide facilities which treat decharacterized wastewater in surface impoundments. A plant by plant description and analysis is attached to these comments.

Union Carbide believes subtitle D surface impoundments should be regulated through Federal guidelines implemented by the states. EPA has embarked on a program to do just that. Union Carbide supports EPA's approach for developing industrial subtitle D guidelines and is participating in the program via the Chemical Manufacturers Association.

I.G. Option 3 would impose significant, unnecessary costs on Union Carbide

The cost of option 3 would probably exceed \$100 million, more than Union Carbide has spent on all other facility modifications driven by RCRA subtitle C to date. See the plant by plant description, attached, for details.

I.H.2 Union Carbide supports the proposed exclusion for subpart C permitted facilities under option 2

A condition for granting an RCRA permit for treatment, storage or

disposal is that the entire facility be subject to corrective action for releases from Solid Waste Management Units(3004(u)). Thus, all wastewater treatment units, including surface impoundments, must meet a standard of release prevention and remediation that protects human health and the environment. EPA or the delegated state agency already has the authority and ongoing programs to regulate releases from these solid waste management units.

I.H.2The subpart C permitted facility exclusion should include facilities subject to Subpart C permit requirements.

The exclusion should be worded along the following lines: "if an impoundment is located at a facility subject to RCRA permitting, no further control would be adopted under Phase IV" rather than the preamble statement (page 43661], "if an impoundment is located at a permitted TSDF, no further" The reasons are as follows:

1. EPA has not yet issued final permits to all facilities subject to RCRA permitting because of the large administrative burden involved. Eligibility for the exclusion should not depend on a Region's or State agencies resource limitations or priorities.
2. EPA has directed its regions to issue corrective action permits based on a "worst first"priority, a sound policy which Union Carbide supports. Thus, facilities which the Region believes pose the lowest risks will receive their permits last. It would be illogical to subject these lowest risk facilities to the new phase IV standards, while facilities judged to be higher risk are excluded.
3. Some facilities subject to RCRA permitting may not have received permits because they are newly regulated from expansions to the hazardous waste definition (e.g. the 1990expansion to the Toxicity Characteristic).
4. Some facilities subject to RCRA corrective action have closed their subtitle C treatment, storage and disposal units. These facilities are nevertheless subject to postclosure care requirements and to corrective action for releases from all Solid Waste Management Units, even though they no longer are permitted for treatment, storage or disposal of hazardous waste.

I.H.2Union Carbide supports the concept of exempting wastewater treatment surface impoundments from phase 4 emissions standards where emissions are subject to alternative state, Federal or tribal requirements.

Air emissions should be regulated under air programs and not subject to overlapping or duplicative RCRA requirements.

I.H.2EPA should clarify which future alternative Federal, state

and tribal emissions control programs qualify for the option 2 exclusion.

How near is "near future?" MACT standards will be promulgated over the next several years on a schedule established under section 112 of the Clean Air Act Amendments of 1990. The listing and schedule were published on December 3, 1993 at 58FR page 63941. EPA should explicitly state that, for purposes of exemption from the phase IV emissions standards, "CAA standards for hazardous air pollutants" includes all sources listed at in the December 3, 1993, Federal Register notice and wastewater from all sources listed in the December 3, 1993, Federal Register notice. This is particularly important to Union Carbide locations. Union Carbide currently generates characteristic wastewater in units subject to future Olefins MACT standards, which we understand EPA will list soon, and may generate characteristic wastewater from groundwater remediation activities subject to future MACT standards for corrective action, scheduled for 2000. In addition, Union Carbide treats decharacterized wastewater in offsite impoundments in a POTW (scheduled for MACT standards in 1995).

H.2 Option 2 emissions standards should not apply to wastewaters subject to alternative state, Federal and tribal standards.

EPA creates some confusion in the preamble by using the terms "addressed in CAA standard" (Figure 2) and "subject to CAA standards" (page 43660). Alternative Federal, state or tribal standards typically do not require controls on all wastewaters from a source. Air regulations have complex applicability criteria in order to focus control efforts on the most significant emissions.

For example, for Texas RACT standards apply controls to wastewater using applicability criteria based on their potential to emit, estimated by a formula based on Henry's law. It would make little sense, and create much confusion and unnecessary expense, to require additional controls for wastewaters with low potential to emit. In other words, the phase 4 rule exemption should not be narrowly limited to wastewaters for which physical controls are required.

I.H.2 UCC supports allowing alternative standards that control either VOC's or Hazardous Air pollutants in lieu of phase 4 land ban standards for emissions.

In particular, wastewater from sources subject to RACT standards for volatile organics should be excluded from phase 4 land ban standards for emissions.

I.H.2 Surface impoundments at offsite TSD's should be excluded from

phase 4 Emission Standards if the dischargers' ICRT wastewaters are subject to alternative state, Federal or tribal standards.

Union Carbide uses an industrial, nonhazardous POTW to treat wastewaters from one of its major facilities. This POTW does not, at present, accept domestic sewage and is therefore not presently eligible for the domestic sewage exclusion. Consequently, the surface impoundments at this POTW would be subject to the phase 4 emission standards under option 2.

The current preamble implies that the POTW facility must itself be subject to Clean Air Act Standards to be exempt from the Option 2 emissions standards.

The phase 2 option should be revised so that facilities subject to CAA standards for hazardous air pollutants in the near future or facilities that receive, treat, or store influent wastewaters from sources which are subject to Clean Air Act requirements (such as MACT standards promulgated under Section 112 of the CAA or state RACT standards for volatile organic emissions) would not be covered by Option 2.

The state RACT standards and MACT standards for major sources include specific provisions for control of emissions of hazardous air pollutants from wastewaters generated by the source.

For example, the HON MACT imposes standards on wastewaters from SOCFI units which ensures that the emissions of HAPS from such wastewaters are appropriately regulated. Thus, it should not be necessary for the Phase IV rule to address air emissions from POTWs which receive wastewaters subject to a MACT standard, since the air emissions from such waters have already been assessed and addressed under the CM.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the

Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P092

COMMENTS Union Carbide Corp.

RESPONDER SS

SUBJECT EQUV

SUBJNUM 092

COMMENT

I.H.2 EPA's flow diagrams, which combine applicability logic and summaries of requirements, are excellent and should be included in the final rule, if options 2 or 3 are selected.

These flow charts are among the best descriptions of a complex rule we have seen. We encourage EPA to include this type of diagram in all major rules with complex applicability criteria.

EPA needs to be careful that the flow charts are fully consistent with the rule. For example, options to (1) pretreat wastewater to 95% VOC reduction/50 ppmw and (2) pretreat wastewater to site specific exit concentration determined by an equation should be included in the figure 2 flow chart for completeness.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P092
COMMENTS Union Carbide Corp.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 092
COMMENT

III. EPA should add additional flexibility to the LDR program by adding an emergency response exemption worded along the lines of the emergency response exemptions from permitting and other RCRA standards at 264.1(g)(8), 265.1(c)(11) and 270.1(c)(3).

Union Carbide manages reactive materials which also exhibit RCRA characteristics. The safest way to manage large spills of these materials is to dilute them with large quantities of water and send to the location's wastewater treatment system. This practice is far safer than retaining them in an undiluted form where they could react or ignite. The 264, 265 and 270 exemptions make it permissible to manage large spills in the safest way, but 268 illogically forbids it.

RESPONSE:

The emergency response exemptions cited by the commenter apply to treatment and containment activities during *immediate* response to hazardous waste discharges. The exclusions do not apply to the ultimate disposal of hazardous wastes. All three exclusions provide that "any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements..." The intent of each of these exclusions is to facilitate the quick implementation of immediate response activities to ensure immediate containment and initial treatment. The ultimate treatment and disposal of any hazardous wastes, including contaminated media, that is generated during immediate response activities must be conducted in full accordance with all applicable hazardous waste management regulations to minimize any continual or potential threats to human health and the environment.

NOTE to EPA: how do we respond to the commenter's specific example of large spills of reactive materials that exhibit one or more characteristics? Tell them to ask for a treatability variance?

DCN PH4P092
COMMENTS UNION CARBIDE
RESPONDER SS
SUBJECT EQUV
SUBJNUM 092
COMMENT

I.G.

Option 2 needs further clarifications and modifications to avoid duplication or overlap with other programs.

Land ban regulations should not impose overlapping or duplicative requirements over other statutes or regulations. Several clarifications and modifications are needed in option 2 to fully meet this goal. These concerns are elaborated in greater detail elsewhere in these comments. Without these changes, significant disruptions and costs of \$40 million or more to Union Carbide are possible.

I.H.2

The exemption for "facilities which meet the pollution prevention" compliance option should be available to off-site facilities if the dischargers to the off-site facility meet the appropriate requirements.

This will not penalize facilities in states that have designed their programs to encourage source reduction approaches in their air programs.

I.H.2

Option 2 leakage standards appropriately recognize the substantial difference in risk between pre biological and biological/post-biological treatment impoundments.

Any seepage from biological or post biological impoundments has already undergone biological treatment. Hazardous constituents have been substantially, if not completely degraded. In addition, the seepage contains nutrients and, for aerobic impoundments, oxygen, which stimulates biological activity within the natural soil liners. Congress recognized the substantially lower risks posed by these units by including the 3005(j)(3), Aggressive Biological Treatment, variance from minimum technology requirements.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P093
COMMENTS Commenter Heritage Environmental
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 093
COMMENT

The Applicability of the Characteristic Waste Treatment Standards is not Clear Relative to Tank-Based CWA Systems

As a result of the Chemical Waste Management v. EPA court decision regarding decharacterization of hazardous waste by dilution, EPA has implemented the concept of Clean Water Act (CWA), or CWA-equivalent, treatment versus non-CWA treatment. In the May 24, 1993 interim final rule for ignitable and corrosive wastes (58 FR 29860), EPA addressed treatment of D001 and D002 wastes managed in treatment systems other than centralized wastewater management systems covered by 40 CFR 268.1(c)(3) (Class I underground injection wells) and 268.3(b) (CWA treatment systems). A CWA treatment system is defined by 40 CFR 268.3(b) as, "...a treatment system which treats wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act (CWA) or which treats wastes for the purposes of pretreatment requirements under section 307 of the CWA...." This definition seemingly includes tank-based as well as land-based (surface impoundments) treatment systems.

However, throughout the preamble discussion of the Phase IV treatment standards regarding meeting universal treatment standards (UTS) for the underlying hazardous constituents of characteristic wastes treated in CWA systems, EPA only discusses treatment in surface impoundments. In fact, Sections I and II of the proposed rule are limited to discussion of surface impoundments. Nowhere are tank-based treatment systems discussed relative to this proposed rule. Yet, the actual proposed language for 40 CFR 268.40 did not specify that these Treatment Standards would apply only to CWA systems involving surface impoundments or Class I injection wells (i.e., land-based treatment systems). Thus, it is not clear which CWA systems would be subject to the requirement to identify and treat underlying hazardous constituents in characteristic wastes.

Although Heritage has already submitted comments regarding this issue in response to the proposed LDR - Phase III rule, we would like to reiterate that the treatment standards for underlying hazardous constituents in characteristic hazardous wastes should

be limited tonon-CWA treatment systems, surface impoundments and injection wells due to the potential risks to human health and the environment inherent in these activities. There is no land disposal involved with tank-based wastewater treatment, particularly in situations involving indirect discharges. CWA systems that do not include surface impoundments do not present the same level of potential risk of leaks, as such systems are typically tank-based with associated secondary containment structures.

In addition, concerns regarding tank leakage, air emissions and discharges to POTWs or surface waters are already addressed by a myriad of existing regulations including: technical requirements for the design and operation of tanks under Subpart J of 40 CFR Parts 264 and 265; RCRA CORRECTIVE action requirements to address releases from permitted facilities; release reporting requirements under Comprehensive Emergency Response, Compensation and Liability Act(CERCLA) and state and local spill reporting regulations; air emissions standards under federal Clean Air Act regulations and similar state and local requirements, as well as the new organic air emission control standards under Subpart CC of 40 CFR Parts 264 and 265; and permitting requirements with stringent constituent limitations under provision of the Clean Water Act and state and local regulations.

In fact, discharges from centralized waste treatment facilities following treatment of hazardous wastes will be subject to the applicable constituent limitations in each facility's discharge permit. EPA is well aware that such limitations will become even more stringent upon promulgation of the pretreatment standards for centralized waste treatment facilities. The dewatered (i.e., nonwastewater) residues resulting from such CWA treatment will be subject to the Treatment Standards applicable to the wastes treated in the system prior to land disposal. Thus, there seems to be no rational argument for additional regulation of wastes treated in a CWA tank-based system. Heritage requests that EPA specifically address how the requirement to identify and treat underlying hazardous constituents applies to tank-based CWA treatment systems, as opposed to the land-based systems discussed at great length in the proposed Phase III and Phase IV rules.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that

underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P094
COMMENTS General Motors Corp.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 094
COMMENT

Integration with Other Statutes Sec. 1006(a) and (b)
Several of the options discussed in this preamble overlap with regulations and programs covered more appropriately under other specific statutes. These RCRA regulations are focused on hazardous waste emissions or discharges taking place in media other than solid waste, that is, water and air. What appears to be happening with the Phase III and Phase IV proposals is that the RCRA regulation writers are unaware of the imbalances that are being created with the CWA and the CAA. Conflict with this portion of the statute has arisen; because other sections of RCRA have caused the Agency to develop duplicative regulations which are obvious in some of the options discussed in this proposal. Two examples are described below:

Example 1

Section 3004(n) Air Emissions.--Not later than thirty months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall promulgate such regulations for the monitoring and control of air emissions at hazardous waste treatment, storage, and disposal facilities, including but not limited to open tanks, surface impoundments, and landfills, as may be necessary to protect human health and the environment.[§3004(n) added by PL 98-616]

This section of RCRA has generated the Subpart CC regulations² that are designed to control volatile organic emissions from TSD and generator tanks, containers and surface impoundments. In fact, the Agency acknowledges that "many industrial sectors that may manage hazardous waste are listed as specific NESHAP source categories. Consequently, facilities at which hazardous waste are managed may be subject to both NESHAP and the RCRA air standards ..." The Agency failed to recognize other areas of the Clean Air Act [New Source Review in Non-Attainment Areas at 40 CFR 51.165(a) or Prevention of Significant Deterioration at 40 CFR 51.166] also regulate the emissions from hazardous waste units.

In fact, certain sections of RCRA seem to be conflicting with itself. Subpart CC regulations enabled under Sec. 3004(n) have been developed to control organic emissions from tanks, containers and surface impoundments. This Phase IV proposal suggests that the

Subpart CC regulations be expanded to include "decharacterized" wastes in an apparent over expansion of 3004(n).

Example 2

3004(m) Treatment Standards for Wastes Subject to Land Disposal

Prohibition.--(1) Simultaneously with the promulgation of regulations under subsection (d), (e), (f), or (g) prohibiting one or more methods of land disposal of a particular hazardous waste, and as appropriate thereafter, the Administrator shall, after notice and an opportunity for hearings and after consultation with appropriate Federal and State agencies, promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste

or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized.

Although, the statutory conflict is less apparent than in the previous example all the same a conflict which involves the Clean Water Act does exist. LDR treatment levels are based upon Best Demonstrated Available Treatment (BDAT) technology for both solid and liquid forms of hazardous waste. Setting BDAT for liquids that are treated prior to disposal is technologically feasible.

However, the LDR Phase III and portions of the Phase IV proposals state that an impounded liquid hazardous waste must meet LDR treatment levels prior to treatment; a technological impossibility.

The Phase IV proposal suggests that certain nonhazardous impounded wastewaters (decharacterized wastes) also meet the LDR treatment levels. This requirement may be acceptable for those wastewater systems that use impoundments after treatment (final polishing); but those systems that utilize impoundments in the early stages of their treatment train (equalization, recirculation or settling basins) this is a technical impossibility since any wastewater treatment occurs after the basin itself. By definition BDAT levels are based upon wastewaters that have been treated with the Best Available Treatment technology.

Phase III Definition of De-minimis Volume and Malfunction Exemptions (Discussed on 60 FR11714)

If the Agency decides that decharacterized wastes must meet LDRs then exemptions should be written into the final rule which account for small volume waste streams and operational anomalies that occur beyond the control of the facility operator (i.e., spills, equipment malfunctions). Additionally, the increased regulation of waste generated by laboratories and low-volume-low-concentration waste streams require significant allocation of resources

and provides very little benefit to the environment. Exemption language could be drafted to include a maximum concentration of each constituent as a function of its UTS and a maximum flow rate (volume per unit time).

Malfunctions of properly maintained equipment or processes resulting in specific, finite releases should be provided for in the final rule. Facilities should not be immediately subject to Phase III

or Phase IV if a malfunction of a single process causes a normally non-hazardous waste stream to exhibit hazardous characteristics. Language should be added to exempt a facility from applicability to Phase III and Phase IV requirements if it can be demonstrated that the equipment was properly designed and operated with appropriate maintenance procedures in place in the case of a malfunction.

Inclusion of exemption language to cover these two general categories would significantly reduce the burden of the regulation on these de-minimis sources. Analytical requirements should be minimized in the implementation of any exemptions for their practical application. If the cost of analysis and record keeping approach that of the alternative; the efficacy of the exemption is

Definition of Decharacterized

The word decharacterized although used a couple of times in two previous Federal Register preamble discussions it has never been codified. General Motors does not accept this term on its face as defined by language in the preamble to this rulemaking for reasons stated previously. General Motors recommends that the term "decharacterized" be defined in a regulatory proposal and published for proper public commenting and then codified into 40 CFR 260.10.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the

characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P094
COMMENTS General Motors Corp.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 094
COMMENT

Executive Summary - The following sections [Statutory Authority - Judicial Ruling Integration with Other Statutes Sec. 1006(a) and (b) Intentional and Unintentional Dilution Effects Described by CWM v. EPA and Point of Generation] describe and pose several arguments favoring Option 1, and disfavoring Options 2 and 3. These arguments are based primarily on statutory and judicial interpretations which explained in detail in the following sections and are summarized as follows:

The Court in CWM v. EPA stood mute in distinguishing between unintentional and intentional dilution. Congress clearly intended to not to include in the LDR program those streams that are unintentionally diluted in a manufacturing process (emphasis added). RCRA Sec. 1006 states that RCRA should not conflict with other environmental statutes or with itself as in the case of controlling organic air emissions (emphasis added). Statutory requirements under Sec 3004(d) have not been satisfied when considering the regulation of "decharacterized" wastes. A particular waste's characteristics as described under 3004(d) at the point of environmental impact should be the factors that are considered when expanding the LDR program and not what the waste may have been at its point of generation. Unintentional dilution effects are accepted and dealt with in other environmental programs. Increases in capital, labor, administrative cost and risk to the workforce outweigh any environmental benefit that may be realized. Options 2 and 3 are counter indicative of the goals of pollution prevention.

Intentional and Unintentional Dilution

Discussion of the Legislative History in the Phase III proposal (60 FR 11707) describes legislative intent with regard to dilution of hazardous constituents either intentionally (diluting for purposes only to meet LDR) and unintentionally (dilution that occurs as part of the manufacturing process). Footnote 5 (60 FR 11707) states:

"The Committee intends that dilution to a concentration less than the specified thresholds by the addition of other hazardous waste or any other material during waste handling, transportation, treatment, or storage, other than dilution which

occurs as a normal part of a manufacturing process, will not be allowed. Such hazardous waste would still be prohibited from land disposal."iv (emphasis added)

Clearly, Congress expressly intended a prohibition against the intentional dilution of hazardous waste to comply with LDR as supported by the court in CWM v. EPA. However, Congress also expressly intended to not include that "dilution which occurs as part of the manufacturing process." iv To this point, situation or intent the Court in CWM v. EPA appeared to stand silent.

Dilution Effects Described by CWM v. EPA

Additionally, in CWM v. EPA the Court states that dilution does not destroy, remove or immobilize hazardous constituents. It should be noted that dilution does indeed cause a drop in the concentration of hazardous constituents where the toxicity or the likelihood of migration of the hazardous constituent has been substantially diminished or reduced to a point where 3004(d)4 and 3004(m)(1) as satisfied. However, the Court in CWM v. EPA failed to recognize that the ability for a contaminant to migrate and cause detrimental effects upon the environment are directly proportional to that contaminant's concentration in a particular environmental media. Granted, as pointed out by the Court (976 F 2d 2 at 23), that a threefold increase in water causes a threefold decrease in the contaminant's concentration the net effect on the mass of contaminant is zero. That is, regardless of the amount of dilution occurring the amount of contaminant remains the same. What the Court did not acknowledge is that threefold increases in dilution; decrease effects of toxicity and the ability to migrate approximately three times.

EPA has considered such unintentional "dilution" effects in the management of contaminants in other media. For example, concepts of "mixing zones" and "dilution factors" in Clean Water Act regulations; air dispersion modeling in the Clear Air Act and multipath analysis in the Hazardous waste Identification Project of RCRA, are used to assess a contaminant's detrimental effects(toxic) on aquatic life, etc., and its ability to migrate at the point of environmental impact.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which

initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. For characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant to the promulgated method.

NOTE TO EPA: This response may still need to address the larger comment of intentional vs. unintentional dilution. Direction is need to develop this response.

DCN PH4P094

COMMENTS General Motors Corporation

RESPONDER SS

SUBJECT EQUV

SUBJNUM 094

COMMENT

Conclusion and Recommendation with Regard to Judicial and Legislative Intent (Options 1, 2, or 3)

Arguments presented in the preceding sections have been summarized as follows:

The Court in *CWM v. EPA* stood mute in distinguishing between unintentional and intentional dilution. Congress clearly intended to not include in the LDR program those streams that are unintentionally diluted in a manufacturing process (emphasis added).

RCRA Sec. 1006 states that RCRA should not conflict with other environmental statutes or with itself as in the case of controlling organic air emissions (emphasis added). Statutory requirements under Sec 3004(d) have not been satisfied when considering the regulation

of "decharacterized" wastes. A particular waste's characteristics as described under 3004(d) at the point of environmental impact should be the factors that are considered when expanding the LDR program and not what the waste may have been at its point of generation. Unintentional dilution effects are accepted and dealt with in other environmental programs.

Increases in capital, labor, administrative cost and risk to the workforce outweigh any environmental benefit that may be realized. Options 2 and 3 are counter indicative of the goals of pollution prevention.

For these reasons the only Option the Agency should consider is Option 1 as described in the preamble on 60 FR 43659.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P095
COMMENTS GE
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 095
COMMENT

A. The Agency should adopt Option 1 because it is consistent with the Chemical Waste Management court's decision and represents sound policy.

1. The Agency should adopt Option 1 because the court's decision in Chemical Waste Management only requires control of hazardous constituents prior to discharge from CWA SURFACE impoundments. EPA indicates that it is disposed toward interpreting the Chemical Waste Management decision to require that the Agency takes steps to regulate cross-media transfers of UHCs from CWA surface impoundments, including subjecting CWA surface impoundments to leak detection and air emission requirements, as well as standards for sludge that accumulates in impoundment even if that sludge does not exhibit a hazardous waste characteristic.⁶ With the exception of the court's statement that EPA must "propose a method of treatment" that would deal with significant threats to human health and the environment posed by decharacterized ignitable wastes containing "high levels of hazardous constituents" that may volatilize in surface impoundments,⁷ there is no basis whatsoever in the opinion for EPA's suggestion that it is required, or allowed, by RCRA to promulgate surface impoundment standards. As indicated by the following messages from the court's decision, the decision is absolutely clear that if a formerly characteristic waste no longer

exhibits a characteristic at the time it enters a CWA surface impoundment, the surface impoundment should not be regulated under RCRA:

"Congress, when enacting RCRA, was cognizant of the substantial development of CWA systems, and, thus, permitted regulatory "accommodation" of RCRA and CWA systems. Thus, we agree with the EPA that, under RCRA, diluted formerly characteristic wastes may be placed in Subtitle D surface impoundments which are part of an integrated CWA treatment train."⁸

"Although a surface impoundment is technically a form of 'land disposal', and treatment therein normally would be at odds with the command of RCRA, this approach is nonetheless acceptable because RCRA requires some accommodation with CWA."⁹

"The EPA's decision to permit 'decharacterized' hazardous wastes

to be deposited in surface impoundments as part of continuing treatment is a reasonable accommodation."¹⁰

3. The Agency should adopt Option 1 because planned, proposed, and existing state and federal requirements provide adequate protection of human health and the environment, deferral to those programs would avoid confusing, potentially overlapping regulatory programs, and adoption of Option 1 would avoid significant regulatory disruption incurred at great expense with relatively little benefit.

As the Agency has pointed out in the Technical Support Document, there are a number of existing statutory and regulatory provisions that address risks intended to be addressed by the proposed Rule.²⁰ These state and federal provisions include regulations covering construction and design of Subtitle D municipal solid waste landfills, air emissions from certain non-hazardous wastewaters, and design and operation of wastewater surface impoundments. The Agency did not, however, consider one important category of state law. In many, if not all, states, the state water pollution control acts and regulations prohibit the discharge of pollutants into groundwaters of the state.²¹ Accordingly, in these states, leaks of wastewater from a CWA surface impoundment would be flatly prohibited without a state discharge permit. These latter permits generally set limits on the amount of toxic substances that can be discharged.

These state provisions, therefore, prohibit the very releases that Option 2's leak detection requirement are intended to prohibit. Based upon the totality of provisions that may apply to risks posed by air emissions, leaks, and sludges from surface impoundment, it is clear that the Proposed rule will provide little environmental benefit.

At the least, the Agency should include consideration of these potentially available protections when assessing the risks posed by surface impoundments. The essential question in this case is whether additional regulations are necessary to reduce risks posed by surface impoundments to acceptable levels. As such, surface impoundment risks cannot be considered in a regulatory vacuum. Rather, the risks must be considered in light of existing statutory and regulatory controls. Otherwise, the Agency runs a significant risk of promulgating regulations that overlap with existing regulations, thereby creating a confusing mass of requirements. The Agency has already recognized this concept in its proposed exemption for corrective action.²² GE's review of the

Agency's risk determination methodology, however, indicates that existing prohibitions on unpermitted groundwater discharges were not factored in to this risk determination.²³ Accordingly, the Agency's risk determination does not accurately reflect the potential risks posed by surface impoundments.

B. If the Agency nonetheless adopts Option 2, the Agency should modify and clarify the proposed Rule.

1. If the Agency adopts Option 2, the Agency should exempt from Option 2 wastewater sumps, wet wells, and lift stations because such units do not meet the Agency's definition of "surface impoundments" and do not present the risks that the Proposed Rule is intended to address.

The Proposed Rule applies to certain "surface impoundments". This definition of a surface impoundment is therefore critical to the applicability of Option 2. The Agency's regulations and background documents supporting the Proposed Rule indicate that the Proposed Rule is intended to apply only to those units that are commonly thought of as surface impoundments. Such units include wastewater holding ponds, settling basins, aeration ponds, and clarification and finishing ponds. In applying its regulations in the past, however, the Agency has adopted an extremely broad definition of surface impoundments. Under the Agency's broad interpretation of the definition of surface impoundments, Options 1-3 of the Proposed Rule would apply to units that are not commonly thought of as surface impoundments and are not utilized for those purposes identified above. Such units include concrete wastewater treatment system sumps, wet wells, and lift stations.

The Agency's regulations define a surface impoundment as A facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials. . . which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.²⁴

This definition indicates that a surface impoundment is a basin-like structure with earthen sides and foundation. This view is supported by the background documents for the Proposed Rule. The technical support document for the Proposed Rule states that CWA surface impoundments are basins used to hold large quantities of wastewater and are comprised of a foundation and an earthen dike with a sloping side.²⁵ Both the Agency's regulatory definition

and the Technical Support Document also indicate that in wastewater treatment systems, surface impoundments are used for wastewater clarification, equalization, and treatment.²⁶

It is unclear, however, whether the Agency would interpret the definition of a surface impoundment much more broadly than the above sources would suggest. Previously, the Agency has addressed the issue of how to distinguish a tank from a surface impoundment for the purposes of RCRA. The Agency has essentially stated that a tank is any unit which, if free standing (i.e., not surrounded by earth) and filled to capacity with the material it was intended to hold, would maintain its structural integrity.²⁷ This could arguably be read as implying that any unit not meeting the definition of a tank would be considered a surface impoundment. If so, under such a broad view of what constitutes a surface impoundment, the applicability of the Proposed Rule would also be much broader than the Agency apparently intended. Under such a broad view, a concrete sump used to aggregate wastewater in a treatment system could be considered a surface impoundment and, accordingly, would be subject to the Proposed Rule.

Most of GE's facilities have extensive systems to collect, transport, and treat wastewater from a large number of individual sources within a facility, as do most manufacturing facilities. These systems often include numerous concrete structures that are either partially or completely surrounded by earth and that are used to aggregate two or more wastewater streams for more efficient transport or treatment. In some cases, these units are also used for elementary neutralization of highly acidic or basic wastewater streams. In essence, these units serve as a part of the wastewater collection system. As an example, at one of GE's facilities, 50 percent of the potentially affected units are sumps that are integral to the proper operation of the facility's wastewater treatment system.

Comparing the construction and uses of these sumps, wet wells, and lift stations to the construction and uses of surface impoundments as described by the Agency in the Technical Support Document, it is clear that the Agency did not intend for the Proposed Rule to apply to such sumps, wet wells, and lift stations. As noted above, the Agency describes a surface impoundment as a large basin-like structure that is constructed primarily of earthen materials and that is used to contain wastewater for some period of time in order to conduct some form of treatment. In contrast, sumps, wet wells, and lift stations are usually much smaller structures that are constructed of reinforced concrete and used primarily to

aggregate and transmit wastewater to other units.

In addition, sumps, wet wells, and lift stations would not generally pose the same level of risk that may be posed by a surface impoundment. Because sumps, wet wells, and lift stations are generally much smaller than surface impoundments, and accordingly have a much smaller liquid surface area, the air emissions from sumps, wet wells, and lift stations would be considerably less than from surface impoundments. As a result, risks posed by air emissions from sumps would be correspondingly less than from surface impoundments. Also, because of their uses, sumps, wetwells, and lift stations would generally not accumulate large amounts of sludge, whereas surface impoundments are designed generally to accumulate sludge. Therefore, the overall risks posed by sumps, wet wells, and lift stations is much less than the risks posed by surface impoundments and require less regulation than surface impoundments.

2. If the Agency adopts Option 2, the Agency should clarify that Option 2 does not apply to corrosive wastewater that is neutralized.

The brief description of the Proposed Rule suggests, but does not clearly indicate, that Option 2 would not apply to units managing waste water that was corrosive at the point of generation but that has been "decharacterized" by neutralization rather than dilution.²⁹ The Agency does make this point in the Technical Support Document, which states that if the characteristic wastewater is decharacterized by any means other than dilution, then the Proposed rule does not apply.³⁰ Moreover, in *Chemical Waste Management*, the relevant portion of the court's holding was limited to the narrow issue of whether decharacterization by dilution is an acceptable form of treatment.³¹

As such, the Proposed Rule should be similarly narrowly tailored to address only situations where the characteristic of corrosivity is removed by dilution. Where corrosive wastewater is chemically neutralized, the court's edict is satisfied because neutralization effectively eliminates the risk posed by such waste and therefore meets the requirements of RCRA § 3004(m).³² It should also be pointed out that neutralization can occur, and is the case for several of GE's facilities, by mixing an acidic wastewater with a basic wastewater. This type of neutralization should also exempt wastewater from Option 2 because it is chemically removing the hazardous characteristics of both streams just as if each stream were separately neutralized. This "mutual neutralization" of acidic and basic wastewater streams

also eliminates the need to transport and use hazardous material for neutralization of these streams, thereby eliminating risks to human health and the environment. Accordingly, the final rule for Option 2 should clearly state that the rule does not apply to surface impoundments managing wastewater that exhibited the corrosivity characteristic but was decharacterized by neutralization.

8. If the Agency adopts Option 2, the Agency should exempt from Option 2 surface impoundments that are used for spill containment or storm water overflow.

Several GE facilities have surface impoundments that are used for spill containment and containment of wastewater during overflow conditions. These surface impoundments are used only occasionally. For example, wastewater would be diverted to a spill containment basin if a spill occurs in the manufacturing area and contaminates the wastewater with an excessively high concentration of pollutants. Such high levels pose a risk to the biological treatment system. Accordingly, such wastewater must be isolated and bled into the system over time. Because such events are not part of the normal manufacturing operations, the spill containment basin would contain wastewater only occasionally. Moreover, because many of GE's operations are batch operations and wastewater can be diverted to the spill basin from several areas of the plant, it is also possible that when such an event does occur, the wastewater that is discharged to the spill containment basin would not contain decharacterized ICR Wastewater. This means that a spill containment basin is likely to contain decharacterized ICR Wastewater very occasionally.

Similarly, several GE facilities utilize surface impoundments to contain wastewater during overflow events. These events are typically due to the fact that storm water runoff from process areas is discharged to the wastewater treatment system. During times of unusually heavy storm events, this stormwater runoff may overload the wastewater treatment system's hydraulic capacity. Therefore, it is necessary to have a way to contain this overflow until it can be bled back into the system gradually. For the same reasons explained above, these overflow basins would contain decharacterized ICR wastewater only occasionally.

As such, these basins do not pose anywhere near the same risks posed by wastewater surface impoundments that contain wastewater continuously. It would not make sense to require facilities to

undertake costly modifications of spill and overflow containment basins in order to protect against releases of hazardous constituents that may occur only rarely. Moreover, it is clear that the Agency did not include such basins in its cost and risk estimates. For these reasons, the Agency should exempt from Option 2 any surface impoundments that are part of a CWA WASTEWATER treatment system and are used to contain wastewater overflow or spill containment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P095
COMMENTS GE
RESPONDER SS
SUBJECT EQUV
SUBJNUM 095
COMMENT

4. The Agency should adopt Option 1 in order to avoid imposing any potentially unnecessary requirements on CWA surface impoundments until the Agency finalizes other relevant rules

and the Agency obtains more data regarding risks posed by CWA surface impoundments.

GE believes that the Agency should defer promulgating a final rule until after the Agency has resolved issues raised by related proposed and final rules. Previously, the Agency has proposed or finalized a number of rules that raise issues pertinent to the Proposed Rule. One such rule is 40 C.F.R. Parts 264 and 265, Subpart CC. Under Option 2 of the Proposed Rule, the Agency is currently proposing to adopt Subpart CC requirements for controlling air emissions from surface impoundments. Subpart CC, however, is currently being challenged and may change. Most notable, the method to be used to determine the concentration of VOCs in the wastewater is in dispute. Because of the uncertainty in measuring applicability levels, interested parties cannot determine whether the Proposed Rule applies to them.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Risks from air emissions will be considered in this study. The commenter is correct in noting that Parts 264 and 265, subparts CC, of 40 CFR regulate certain air emissions from hazardous waste management units such as surface impoundments, as well as all units downstream from the point of introduction of a specific hazardous waste, until such time that treatment of the volatile organic chemicals occurs. The subpart CC requirements are limited to specific volatile organic chemicals

present at greater than 100 ppmw in these hazardous wastes. EPA cannot predict at this time whether additional volatile or semi-volatile organics not addressed by the subpart CC requirements may pose a potential risk to human health and the environment. EPA may consider additional requirements for air emissions from hazardous waste management units if such requirements are indicated by the risk assessment.

DCN PH4P095
COMMENTS GE
RESPONDER SS
SUBJECT EQUV
SUBJNUM 095
COMMENT

4. If the Agency adopts Option 2, GE supports the Agency's proposal to exempt all facilities that are subject to RCRA's corrective action provisions because such provisions give the Agency adequate and flexible authority to address any unacceptable risks posed by CWA surface impoundments.

The Agency has proposed exempting from Option 2 all facilities that are part of a permitted hazardous waste treatment, storage, and disposal facility because RCRA's corrective action authority would provide adequate authority to address releases from the surface impoundment. GE fully supports this exemption. A number of U.S. facilities operated by GE currently have Part B permits and additional facilities are or were under interim status. All of these facilities are subject to the Agency's corrective action authority. Requiring these facilities to also comply with the extensive and expensive requirements of Option 2 would be unnecessary and would provide no additional environmental benefit. Therefore, if the Agency adopts Option 2, GE strongly urges the Agency to exempt facilities that are subject to RCRA corrective action.

GE would also note that the scope of this exemption should be coextensive with the corrective action jurisdiction. Accordingly, because this authority also applies to facilities that previously had a TSD part B permit but have since converted to generator-only status, the exemption should apply to these facilities as well.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic. On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore,

the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P095
COMMENTS GE
RESPONDER SS
SUBJECT EQUV
SUBJNUM 095
COMMENT

10. If the Agency adopts Option 2, the Agency should seek public comment on the precise language of the regulation prior to promulgating the final rule in order to provide for adequate public review and comment.

Option 2 of the Proposed Rule is set forth in the Federal Register in narrative form only. The Agency did not provide the text of Option 2. As the Agency is well aware, however, the precise wording of a regulation is extremely important in determining whether and how a regulation will work in practice. As such, it is imperative that the Agency provide interested parties with an opportunity to comment on the text of Option 2 before the Agency finalizes this rule. Therefore, if the Agency adopts Option 2, the Agency should publish the text of Option 2 as a proposed rule and seek comment on such text.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P095
COMMENTS GE
RESPONDER SS
SUBJECT EQUV
SUBJNUM 095
COMMENT

Of greater significance is the impending hazardous waste identification rule ("HWIR"). It is GE's understanding that the HWIR will set concentrations of hazardous constituents below which a waste would no longer be subject to regulation under RCRA, including the land disposal restrictions. It is also GE's understanding that these HWIR "exit criteria" are risk-based and, accordingly, for some hazardous constituents will be lower than the universal treatment standards, which are technology-based. If the Agency promulgates the Proposed Rule before the HWIR, a number of facilities would be required to come into compliance with the Proposed Rule's requirements only to be exempted under HWIR.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P097
COMMENTS Hazardous Waste Management
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 097
COMMENT

Options To Ensure That Underlying Hazardous Constituents In Decharacterized Wastes Are Substantially Treated Rather Than Released Via Leaks, Sludges, And Air Emissions from Surface Impoundments (60 FR 43655)

The Agency proposes three options for addressing cross-media releases via leakage, air emissions, or disposal of untreated sludges from Subtitle D surface impoundments which receive decharacterized wastewater discharges. Of the three options presented, the HWMA favors Option 1 because it is the most practical approach proposed and does not add another layer of requirements to existing regulations which adequately address Subtitle D surface impoundments when they are located at RCRA permitted or interim status facilities. Because 42% of these Subtitle D surface impoundments are located at TSDFs which already have monitoring and release requirements (60 FR 43659), if cross-media releases occur from these unpermitted impoundments such impoundments can be addressed by the Agency under the authority of RCRA §3004(u) or §3008(h).

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic. On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P099
COMMENTS Ohio EPA
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 099
COMMENT

Ohio has few pre-biological wastewater surface impoundments in Ohio. Most of the surface impoundments remaining are post-biological polishing ponds. Ohio has some aged ponds which are still in operation which have no liners, no leak detection, and no groundwater monitoring. In addition, some surface impoundments are operating with no point of discharge.

DHWM disagrees with the position that properly operating surface impoundments that receive decharacterized waste should be considered land disposal units. However, it is conceivable that leaks from these units may be considered disposal of UHCs. Contamination may enter drinking water tables via groundwater thus potentially harming human health and the environment. If there is a substantiated risk from UHCs, DHWM supports option 2 proposed by U.S. EPA. Ohio believes that this option will best control those impoundments which are not being managed properly.

Wastewater treatment facilities in Ohio are subject to regulations promulgated under the Clean Air Act (CAA). Ohio EPA's Division of Air Pollution Control requires facilities emitting more than 10 lbs/day/unit to obtain permit and maintain records. Facilities emitting less than 10lbs/day/unit are required to keep records for verification. DHWM prefers that our progressive air pollution control division continue to successfully oversee CAA programs that regulate surface impoundments. In addition, it is realized that the CAA programs is developing regulations that will address air emissions from wastewater surface impoundments in certain industries.

The presence of volatile organic compounds (VOCs) does not guarantee that these compounds will be released into the atmosphere. Many factors affect VOC emissions, such as evaporation rates of wastewater, flow rate through the impoundment, type of VOC's, and chemical makeup of wastewater. Therefore, wastewater impoundments should be evaluated on an individual basis. DHWM prefers that the regulation of air emissions from surface impoundments remain solely under the oversight of CAA program.

DHWM request's detailed guidance on how deferral to CAA

regulations will be implemented. It is unclear as to whether a facility which is excluded from CAA will also be excluded from the proposed RCRA extended Subpart CC rules. Will a facility need to hold a permit issued by CAA program to be excluded from these RCRA rules?

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P099
COMMENTS Ohio EPA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 099
COMMENT

Ohio EPA's Division of Hazardous Waste Management (DHWM) reviewed the above referenced Federal Register and has the follow comments. Although the U.S. EPA has good intentions, we did not find evidence that the presence of Underlying Hazardous Constituents (UHCs) in surface impoundments containing decharacterized wastewater pose a risk to the environment that justifies adding them to the universe of facilities regulated under RCRA. We agree that additional regulation of these types of impoundments may be necessary. However, RCRA is not the best program to regulate them. Most of Ohio's wastewater surface impoundments are secondary or tertiary treatment units regulated under the Clean Water Act (CWA). DHWM does not believe properly operating surface impoundments otherwise regulated under the CWA need to be regulated under RCRA.

Ohio has few primary surface impoundments. Wastewater surface impoundments are not required to remove sludges based upon a time schedule. Sludges are removed when it is deemed necessary by the facility. By managing leaks, DHWM feels that any risk posed by sludges in the surface impoundment will be controlled. We are confident that any situation resulting from improper handling of sludge will be regulated under other laws. Regulation under RCRA is not necessary.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the

Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P100
COMMENTS Commenter Phillips Petroleum
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 100
COMMENT

II. Wet Weather Flow (Stormwater) Impoundments Should be Exempt from Phase III and IV LDRs

Because many petroleum refineries are located in areas that receive large amounts of rainfall, most facilities have large stormwater impoundments. These stormwater impoundments ("wet weather flow impoundments") receive relatively small overflows of process water which may contain decharacterized wastewaters, along with stormwater. After the storm event, the mixture of stormwater and process water can be retained in the impoundment and fed back through the wastewater treatment system at a controlled rate, or if sufficiently clean, may be directly discharged. Separate stormwater impoundments are necessary so that the large amounts of water managed during a storm event will not flood the wastewater treatment system and interfere with the efficiency of the aggressive biological treatment process.

Wet weather flow impoundments are fundamentally different from the process water impoundments considered under this rulemaking. Typical wet weather flow impoundments receive water infrequently, and after receipt are drained to make space available for the next storm

event. If the UTS are exceeded at all, they are only exceeded for short, transient peaks at the beginning of storm events when the proportion of process water to stormwater is the greatest. Consequently, there is limited total loading of UTS constituents into wet weather Flow Impoundments. Because of the very low levels of UTS constituents that find their way into such impoundments, and their short-lived residence time, the environmental risk posed by these units is small or nonexistent. Because of the low risk associated with these units, and high cost of alternative means of managing stormwater, EPA should exempt wet weather flow impoundments from the Phase III AND Phase IV rules. A similar finding was made in the F037 and F038 (Primary Refining Sludge)listing [55 Fed. Reg. 46374 (Nov. 2, 1990)]. The environmental benefits offered by these units, by insuring the quality of the wastewater treatment in the process wastewater treatment system, when balanced with the very minimal risk and high cost of alternative means of configuring the stormwater management

system, suggest that these units should be exempt from the Phase III and Phase IV rules.

III. EPA Should Adopt Option 1, No Further Requirement for Non-Hazardous Surface Impoundments.

EPA discusses three potential options for addressing what, if any requirement should attach to land based units that manage decharacterized wastes. Phillips urges EPA to adopt Option 1, which provides for no additional controls outside of the Phase III LDR. As discussed more fully below, the "Third-third" decision does not require, or even suggest, any additional requirements for surface impoundments receiving decharacterized waste, nor was the "treatability group doctrine" affected by the court's decision. Furthermore, the low risks posed by Clean Water Act(CWA) surface impoundments do not warrant any additional regulation under RCRA Subtitle C.

Unfortunately, while EPA seems to support the "treatability group doctrine" in the early pages of the Phase IV preamble, the sludge management standards presented in Option 2 undermine the "doctrine". Instead of the trigger for sludge treatment being the TC levels (as would be the case if the "treatability group doctrine" was followed), EPA designates UTS levels as the trigger for requiring LDR treatment of sludges. Phillips urges EPA to reexamine its position and maintain the "treatability group doctrine" as it was originally applied.

V. If EPA Should Adopt Option 2

If EPA decides it must regulate non-hazardous surface impoundments under the Phase IV rule, EPA should adopt Option 2. As explained in the Comments of the American Petroleum Institute(API) submitted to the docket in response to this proposal, biological surface impoundments do not present significant environmental risks for sludges or leaks. Furthermore, since all petroleum refineries are subject to the petroleum refinery MACT, air emissions from wastewater units are already regulated under the CAA.

VI. EPA Should Not Adopt Option 3.

Phillips agrees with EPA's conclusion that Option 3 is not appropriate. Requiring MTR for surface impoundments managing non-hazardous waste is clearly not required by the Third-Third decision of the RCRA Statutory scheme. It would cause excessive cost and regulatory burden and would trump many reasoned and considered decisions that EPA made in facility-specific regulations. As EPA observed, the costs are not

justified by the risks that these units present. It would be clearly erroneous for EPA to adopt Option 3. It would be completely unconscionable should EPA do so and not allow the full four-year compliance period provided by Section 3005(j). The issue is governed by the position adopted by EPA that Section 3005(j)(6) provides that non-MTR impoundments must retrofit or close within four years of the date of identification or listing of the newly regulated wastes.

It would be both illogical and inequitable to conclude the period would run from the initial identification of the ICR wastes (well over four years ago), since generators of such wastes will have no way of knowing that their decharacterized non-hazardous wastes could not be placed in Non-MTR surface impoundments. Thus, it would be impossible to comply with that requirement now and unfair to start the clock before notice is given that additional requirements will apply.

VII. Non-Hazardous CWA Surface Impoundments Simply Don't Warrant Further Regulation.

As EPA observes in the preamble to the proposed rule, there are numerous regulatory authorities that EPA has or may use to regulate non-hazardous surface impoundments that pose unacceptable risks [60 Fed. Reg. 43659-60]. Indeed, since 1990 there have been numerous regulations, several of which are discussed below which dramatically reduced the toxicity of water managed in wastewater treatment systems since 1990. For example, the organic Toxicity Characteristic (TC) rule [55 Fed. Reg. 11798 (Mar. 29, 1990)] regulates the toxic constituents that are most likely to pose a risk to human health or the environment. As a consequence of the TC rule, many surface impoundments have become subject to RCRA Subtitle C, or to avoid such regulation, have reduced the concentration of toxic constituents entering the impoundments. Similarly, the Agency has promulgated listings that have subjected additional CWA surface impoundments to full RCRA Subtitle C regulation. For example, in 1990 EPA listed F037 and F038, (Primary Refining Sludge) [55 Fed. Reg. 46354 (Nov. 2, 1990)]. This listing resulted in the Subtitle C regulation of surface impoundments upstream of biological treatment at petroleum refineries. If EPA believes that there are unacceptable threats posed by a particular industry, the agency can apply a more appropriate mechanism to address those threats. A listing determination allows the Agency to target its regulations towards actual environmental threats. An overly inclusive instrument such as proposed Option III is simply not warranted.

In addition, many federal air requirements reduce the risk posed by leaks and sludges as well as risks posed by air emissions. For example, in the recent Refinery MACT rule [60 Fed. Reg. 43244 (Aug. 18, 1995)] the most common compliance strategy is to reduce the concentration of VOCs before the wastewater is introduced to the surface impoundment. Since there are less hazardous organics entering the impoundment, the risks from any water leaking is reduced, as well as the potential adsorption of organics to the sludge. In fact, the industries covered by the phase IV proposal have or will have air regulations that could cover wastewater treatment systems if they were significant source of emissions. As a consequence, EPA either has or will have an opportunity to regulate air emissions from wastewater in a manner appropriate to a particular industry or facility.

In addition to these significant regulations that would overlap with any Phase IV regulation of surface impoundments, regulation of non-hazardous (Subtitle D) surface impoundments is contrary to the RCRA statutory scheme, and would provide redundant regulation to State regulatory programs. RCRA generally reserves the regulation of non-hazardous solid waste (Subtitle D) units for the state. See RCRA Section 4001 et seq.. Accordingly, EPA should not leverage its authority under Section 3004(m) to regulate non-hazardous surface impoundments.

VIII. EPA Should Allow Public Review of the Regulatory Language for the Option Selected.

EPA has not proposed any specific language for the three options discussed in the preamble. To the extent that this suggests that the Agency is inclined to adopt Option 1, Phillips supports EPA's approach. However, should EPA choose Options 2 or 3, the Agency should allow public review of the regulatory language. The details of the regulatory language are particularly important in the implementation of a complex regulatory scheme, such as the LDRs. While EPA has explained its intent in the preamble, it is important for the regulated community to have an opportunity to review the actual regulatory language.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land

Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P101
COMMENTS Oregon DEQ
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 101
COMMENT

1. Cross-Media Releases

If an environmental regulation addresses specific hazardous constituents, and those constituents default into another program, then it too should evaluate those same constituents for environmental effect before they are ultimately disposed. There is no rationale addressing the constituents in the first place if only to ignore them when they are disposed. For instance, it does not make sense to evaluate hazardous wastes at the point of generation for underlying constituents (UHCs) and then not address them at the point of disposal in a surface impoundment regulated under the Clean Water Act. EPA's proposed Phase IV rule does not adequately resolve this issue. The options being considered are very complicated and confusing. Instead, EPA should streamline the program by evaluating UHCs at the point of generation, during the hazardous waste characterization phase, rather than under the LDR as is done currently. The multi-pathway analytical model being considered under HWIR could serve as basis for a revised toxicity characteristic (TC) determination regulation, which could include the UHCs. Under this scheme, generators would evaluate UHCs up front and know whether they pose a hazard to human health or the environment. This would eliminate having to regulate the UHCs under LDR if the waste is hazardous or has been decharacterized.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore,

the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P102
COMMENTS COMMENTER Chevron
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 102
COMMENT

1) Option #1 Complies with the Court's Chem Waste Decision.
As noted in Chevron's May 1, 1995 comments to EPA on the proposed Phase III LDR rule, achievement of CWA NPDES permit requirements including compliance with whole effluent toxicity limits should constitute treatment equivalent to RCRA LDR standards. Thus, because the court in the Chem Waste decision made it clear that satisfying RCRA treatment standards at the point of CWA discharge is sufficient to satisfy RCRA section 3004(m) requirements, any further LDR regulation of CWA surface impoundments is not necessary under the court's decision, because any such regulation would not accommodate the LDR requirements and the CWA "to the maximum extent practicable." As such, EPA should adopt Option 1 (no new LDR regulations) because it complies with the court's decision.

2) EPA's Risk Assessment Is Flawed And Can't Be Used To Justify New LDR Controls on Subtitle D Surface Impoundments.

Besides the above argument, there are other valid reasons that EPA should adopt Option 1. Foremost, EPA has simply not shown that the risks justify additional regulations. EPA's Risk Assessment lacks thoroughness and sufficient documentation, and certain risk calculation uses worst-case and extreme assumptions (contrary to EPA's own guidance), and can not be relied upon to justify new rule making. Specifically:

Leak Risk Assessment Used an inappropriate and overly conservative DAF of six, and old wastewater data developed before many industries upgraded their practices, processes and wastewater systems to comply with CWA NPDES permits, the Toxicity Characteristic rule, or other laws/regulations, or as a result of changing business needs. Even so, the Risk Assessment supports EPA's analysis that biological treatment and post-biological treatment surface impoundment do not pose significant risks and should not be regulated by the phase IV rule.

Sludge Risk Assessment Also used an inappropriate and overly conservative DAF and out-of-date data. Even so, the assessment showed that only three pre-bio surface impoundments, out of some 377 industry-wide units evaluated by EPA, may potentially pose unacceptable risks. These risks are driven by two UTS

constituents, which we understand are detected today in wastewater systems at significantly lower concentrations than assumed by EPA in the risk assessment. Clearly, even using the existing estimate of risk, sludges in non-hazardous surface impoundments do not pose significant risks to justify industry-wide controls.

Air Emissions Risk Assessment Relies completely on EPA's flawed risk assessment from its problematic Subpart CC rule. Extremely conservative assumptions are used, like assuming that all VOCs act as carcinogens and basing maximum individual risk calculations on exposure occurring continuously 24 hours per day for 70 years, 25 yards from the source. In addition, EPA did not distinguish risks from surface impoundments compared to risks from tank units when it applied the assessment to the Phase IV rule (As EPA noted in footnote 34, page 246 of RIA) and did not present any breakdown of risk by type of surface impoundment. Yet, EPA has applied the results of its flawed risk estimate equally to all types of surface impoundments. Clearly, the flawed Subpart CC Risk Assessment should not have been simply transferred to this rulemaking.

3) Air Emissions From Phase IV Surface Impoundments Do Not Warrant Further Regulation.

Since regulations promulgated under Section 112 of the Clean Air Act are to cover all major sources of hazardous air emissions within relevant source categories, there is no need to impose duplicative requirements under RCRA. Under Section 112, emerging MACT standards (e.g., Refinery MACT) and existing Hazardous Organic and Benzene NESHAPs regulations currently or soon will adequately address air emissions from Chevron's surface impoundments.

7) Stormwater Impoundments Which Receive Small Amounts Of Process Water With Previously Characteristic Waste During Storm Events Should Be Exempt From The Phase IV Rule.

A number of Chevron facilities are located in areas that receive large amounts of rainfall. These facilities have stormwater impoundments which are used to manage large quantities of stormwater runoff. These impoundments can receive relative small, intermittent quantities of process water for limited amounts of time during storm events.

Because Chevron's stormwater impoundments are regulated by NPDES direct discharge permits and pose negligible risks, they should be exempt from the Phase IV rule. The negligible risks associated by these units would not justify the large cost and technical difficulty associated with alternate means of managing large quantities of stormwater.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P106
COMMENTS Commenter Pharmaceutical Research Manuf. Assn.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 106
COMMENT

PhRMA agrees with EPA's deferral to existing federal rules and rules underdevelopment, such as Pharmaceutical MACT and Off-Site Waste Operations NESHAPS, to avoid duplication of air rules.

As stated in the preamble to Phase IV, EPA is presently implementing Section 112 of the CAA to impose technology-based standards for hazardous air pollutants at enumerated major sources, requiring control by means of Maximum Achievable Control Technology(MACT).

Examples of forthcoming standards are the Pharmaceutical MACT and Off-Site Waste Operations NESHAPS. These rules are subject to explicit deadlines, and will address emissions from wastewater potentially affected by the Phase IV Land Disposal Restrictions proposed rule.

PhRMA notes that categorical rulemakings are now in progress that will apply specifically to pharmaceutical operations. Under these new rules pharmaceutical firms need to meet the requirements of the Pharmaceutical Effluent Guidelines (Office of Water) and the Pharmaceutical MACT (Office of Air). Both of these are technology-based regulations, one addressing treatment for constituent concentration in wastewater the other dealing with percent removal requirements to control air emissions. The disposal of residuals (e.g., wastewater treatment sludge) from pharmaceutical wastewater treatment operations would also be addressed by the Off-Site Waste Operations NESHAPS (Office of Air).

PhRMA believes that once the above regulations are in place, EPA's concerns will be more than adequately satisfied with the need for any additional requirements under HSWA.

Therefore, PhRMA suggests that EPA include an exemption from the Phase IV Landban rule for surface impoundments that comply with the forthcoming Pharmaceutical Effluent Guidelines or the Pharmaceutical MACT and for residuals from surface impoundments that comply with the Off-Site Waste Operations NESHAPS.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment

via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

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DCN PH4P107
COMMENTS Uniroyal Chemical Co.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 107
COMMENT

1. Uniroyal Chemical recommends that the USEPA address releases related to Subtitle D surface impoundments through existing and future Agency programs as proposed in option 1 rather than moving forward with the proposed rule.

The proposed rule regulates releases to the air, releases to the groundwater, and releases from management of "derived from" wastes such as sludges removed from the impoundments. In Uniroyal Chemical's opinion, moving forward with options 2 or 3 will result in unnecessary regulatory redundancy and yet will not further the goals of the 1984 Hazardous and Solid Waste Amendments (HWSA) to the Resource and Recovery Act (RCRA). The USEPA has embarked on a regulatory simplification process this past calendar year. Moving forward with either Option 2 or 3 is inconsistent with this goal as these options will add air standards to RCRA rather than the air regulatory program, these options will add standards to Subtitle C for Subtitle D impoundments, and these options will revise the definition of "point of generation" in 40 CFR 268 rather than 40 CFR 261.

The HWSA statute requires that any treatment standards established under the land disposal prohibition program substantially diminish the toxicity or mobility of hazardous waste such that short and long term threats to human health and the environment are minimized. Uniroyal Chemical does not believe that the proposal is dealing with constituent levels that are high enough in quantity to be a "substantial" threat. Uniroyal Chemical also believes that current regulations together with planned regulations will accomplish the same environmental benefits as implementation of the Option 2 or 3 programs. There has been significant activity in regulating air emissions from surface impoundments in the last five years. Many of these will impact Subtitle D surface impoundments which receive decharacterized wastewaters. The USEPA describes these rules on pages 43659 to 43660 of the preamble to this rule. They include standards related to the New Source Performance Standards (NSPS) and Hazardous Organics National Emission Standards for Hazardous Air Pollutants (NESHAPS) programs. The USEPA notes that not all surface impoundments which are covered by this rule are already covered by the current or planned NSPS or NESHAPS

rules. Uniroyal Chemical has reviewed these rules for applicability to their facilities. If these impoundments are not covered under this large body of regulations, it is likely indicative that the air emissions are

not significantly harmful or large to warrant significant control standards. If the USEPA has reason to believe otherwise from their information collection activities, these air programs would be a more appropriate place to add air rules rather than attempting to regulate air emissions under the RCRA program.

This proposed rule applies to only Subtitle D surface impoundments which receive decharacterized wastewaters. As noted on page 43660 of the preamble, many states have Subtitle D programs which regulate the entire universe of Subtitle D surface impoundments. While there is a broad spectrum of variation in the state regulatory programs which vary from those which include liner, leachate collection, and groundwater monitoring requirements to those which do not address surface impoundments, it is recommended that the USEPA review the critical details of these programs and move forward with its own activities related to Subtitle D rather than regulating Subtitle D impoundments under the Subtitle C program.

With regard to management of a sludge generated in a nonhazardous surface impoundment which received decharacterized wastewater, Uniroyal Chemical believes that managing this waste as anything other than a newly generated waste is contrary to the framework upon which the Hazardous waste management program is built and will result in over management of wastes which has little potential to cause significant harm to people or the environment. There has been significant distinction in the management of hazardous wastes which are hazardous due to being "listed" or being "characteristic" from the beginning of the hazardous waste management programing 1980. A listed waste has always been subject to the derived from rule under 40 CFR 261.33(d).The wastes which are listed under this rule are by far and large listed for toxicity. A

characteristic waste has never been subject to the same degree of management and with the exception of the toxicity characteristic wastes is required to be managed as hazardous waste more for its potential to cause fires, explosion , and other potentially damaging events rather than toxicity related to human health. Note on page 33108 of the May 19, 1980 Federal Register that in regulating ignitable wastes the USEPA's objective was "to identify wastes capable of causing fires during routine transportation, storage and disposal and wastes capable of severely exacerbating a

fire once started." With regard to corrosive wastes, on page 33109 of the May 10, 1980 Federal Register the USEPA defined corrosive wastes such that the definition "attempted to address the various hazards presented by corrosive wastes. EPA chose pH as one barometer of corrosivity because waste exhibiting low or high pH can cause harm to human tissue, promote the migration of toxic contaminants from other wastes, react dangerously with other wastes, and harm aquatic life." Land disposal restrictions applied to decharacterized wastewaters treated in surface impoundments have little relevance to the initial objectives. If it were appropriate to carry through the definition of "hazardous" to characteristic wastes, Uniroyal Chemical believes that it would be more appropriate for the USEPA to manage this activity under the definitions of hazardous waste section of the rules rather than by the land disposal restrictions. "Point of Generation" is a critical definition, not a term of art. Uniroyal Chemical recommends that the USEPA not revise the definition through the Phase IV proposed rule.

3. Uniroyal Chemical recommends that stormwater impoundments not be included in the rulemaking if option 2 or option 3 is selected. The discussions for options 2 and 3 indicated various categories of Subtitle D surface impoundments that would be excluded from this regulation. Stormwater impoundments were not in the exclusions. The regulatory exclusion under 40 CFR 264.1(8)(I) and 40 CFR 265.1(8)(I) excludes immediate response activities related to imminent hazard (spill) situations. The extension of this section to any Subtitle D surface impoundments regulated under Phase IV land disposal restrictions is appropriate as any spill which was other than de minimis in quantity would result in a reportable quantity and the National Response Center, the USEPA, or state environmental agency would be informed. These agencies could advise the facility regarding any special requirements. A stormwater impoundment should normally receive only dilute wastewaters thus provision of special emission controls or design criteria directed towards a potential catastrophic event would be an unnecessary and costly burden.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when

generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P107
COMMENTS Uniroyal Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 107
COMMENT

2. Uniroyal Chemical supports the delay of these rules until the USEPA has fully evaluated the Phase III and Phase IV comments as mentioned on page 43655.

Full consideration of all submitted comments should be a part of every regulatory rulemaking. It is especially important in implementing or deciding not to implement the Phase III and Phase IV Land Disposal Restrictions due to the current proposed legislative revisions related to underground injection wells and surface impoundments. In addition, Uniroyal Chemical believes that the USEPA has significantly underestimated the impact of this regulation on the regulated community if it believes that only 300 surface impoundments will be impacted. This proposal if promulgated will impact future expansion decisions in any company which operates a Subtitle D Surface impoundment. The selection criteria for where to install new production facilities at existing manufacturing facilities will need to include the impact on any surface impoundments if a decharacterized waste will be generated.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may

result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P109
COMMENTS Ford
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 109
COMMENT

The proposed rule provides three separate options for addressing the cross-media transfer of hazardous constituents to air or ground water from air emissions, sludges, and leakage from "decharacterized" wastes managed in Subtitle D surface impoundment's. Although the term "decharacterized" has never been formally defined, it is understood to describe waste streams which have been physically changed to no longer exhibit a hazardous characteristic. Options 2 and 3 would require large expenditures of precious resources to apply Subtitle C monitoring and control requirements to Subtitle D surface impoundments (Option 2), or treat each individual waste stream to meet the universal treatment standards (Option 3) without corresponding environmental benefit. Option 1, which relies on existing and proposed regulation to control these cross media transfers, is a better approach when considering the effective use of resources, statutory authority, and media-specific experience within the agency and the regulated community.

Both Options 2 and 3 would require a facility to identify the "point of generation" for all "decharacterized" waste streams. This information would be used to determine if the rules are applicable to a given Subtitle D lagoon or surface impoundment as well as which streams would require pre-treatment (in the case of Option 3).

This determination would require costly sampling and analysis on potentially hundreds of sources for a large facility. Currently, it is unknown whether a waste stream has been "decharacterized" or not because individual sewer point source discharges have not been historically sampled for RCRA characteristics. The sampling would have to be coupled with process knowledge by technical experts to assure that the "snapshot" provided by a limited sampling adequately characterized the point sources. The cumulative costs described above as well as the added overhead burden of documentation make this approach unworkable.

Option 3 requires waste streams to be treated such that the underlying hazardous constituents would meet the universal treatment standards at the "point of generation." Typical Wastewater treatment facilities at manufacturing facilities have

been designed so the industrial wastewater is segregated into at most two or three streams. That is oily wastewater and wastewater requiring metals treatment. These wastewaters are aggregated at the headworks of the wastewater treatment facility and then processed in a semi-batch manner. This particular arrangement of the equipment establishes a "central point" within the facility for wastewater treatment and thus allows for manageable labor allocation, maintenance and capital spending. To treat hazardous waste streams (wastewater streams flowing to wastewater treatment) at each point of generation is technically and administratively impossible. To identify and control these discharges at the point of generation would be extremely costly with respect to both capital improvements and labor, with minimal environmental benefit.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P113
COMMENTS CMA
RESPONDER SS
SUBJECT EQUV
SUBJNUM 113
COMMENT

C. The Phase III and Phase IV Rules Should Have A Common Effective Date. Significant confusion and disruption could result if EPA imposes different effective dates for the Phase III and Phase IV rules. At the outset, it must be noted that the two rules are ostensibly part of the same effort, to determine what regulations to impose on decharacterized wastes placed in CWA surface impoundments. Having the two rules as separate proposals with separate but overlapping comment periods is already creating difficulties for industry.

More importantly, however, serious problems could result if the Phase III rule is promulgated and made effective before the Phase IV rule is promulgated. On the effective date of the Phase III rule, companies will be forced to decide whether to continue to place decharacterized wastes in CWA surface impoundments, or to switch to other forms of management (such as tank-based systems). In many cases, because of the new requirement to meet UTS at the point of discharge for constituents not addressed in the NPDES permit, significant capital expenditures may be required in order to continue operating the surface impoundments. Additional treatment steps may have to be added, either in the impoundments or before them. In other cases, NPDES permits may be amended to add additional constituents, often requiring additional treatment steps as well. However, companies taking these expensive steps may discover later that the regulatory option ultimately chosen under Phase IV for cross media contamination makes such treatment or permit limits impracticable or too costly.

Furthermore, the particular combination of Phase IV requirements EPA chooses (if any) could determine the most cost-effective way to modify a CWA system to meet the Phase III requirements at the point of compliance.⁵ EPA is considering three different options for Phase IV. Companies cannot adequately plan for compliance with Phase III without a decision by the Agency on which option (if any) will be chosen under Phase IV. In short, staggered effective dates for Phases III and IV would result in a tremendous waste of resources for companies, as well as significant confusion and difficulty in compliance.

If, on the other hand, the Phase III and Phase IV requirements are made effective simultaneously, companies will be able to make an informed decision about whether to retain CWA surface impoundments, and whether and how to modify them to comply with the new requirements.

D. EPA Has Authority Under RCRA To Delay The Effective Dates For Phases III And IV.

Subject to court-approved schedules for developing the LDR and HWIR rules (which can, of course, be changed with leave of court)⁶ EPA has ample authority

to delay the effective dates of Phases III and IV in order to prevent the confusion and disruptions described above.

First, the Phase III and IV rules are not new treatment standards or prohibitions subject to the immediate effective date provisions of RCRA § 3004(h). Section 3004(h) provides that 5 If EPA chooses Option 3, essentially all of the affected surface impoundments will have to be replaced with tank-based systems, because UTS will have to be met before wastes can be placed in the impoundments. If EPA makes that choice, any changes made within surface impoundments to allow UTS to be met at the CWA point of compliance would be wasted.

6. In most cases, court-established schedules merely set the date for a final rule to be promulgated, leaving the effective date up to the Agency's discretion.

Prohibitions from land disposal shall become effective immediately upon promulgation, and § 3004(m)(2) provides that treatment standards are to become effective "on the same date" as the corresponding prohibition. In the case of the wastes addressed in Phase III and IV, EPA has already promulgated the prohibition, in the Third-third rule. 40 C.F.R. § 268.33. Furthermore, EPA has already promulgated currently applicable treatment standards applicable to these wastes. 40 C.F.R. §§ 268.41-43. EPA has stated clearly that treatment standards are currently in place for these wastes, and that the Phase III and IV rules will merely amend these standards. 58 Fed. Reg. 29,863 (May 24, 1993).

Accordingly, it is not possible for the Phase III and IV regulations to become effective on the same date as the prohibitions to which they will correspond, because those prohibitions occurred in the past. The statute does not say that amendments to treatment standards must be effective immediately, and there is no reason that they should be.⁷

Furthermore, the Phase IV rules, if Option 2 is chosen, would not be subject to the LDR timing requirements in § 3004 at all, because they would not be LDR rules, as explained above. RCRA §§ 3004(h) and (m) refer to "prohibitions" and "treatment standards." The requirements that are contemplated in Option 2 of the Phase IV proposed rule are neither one. The proposed requirements, addressing air emissions, sludges, and leaks from CWA wastewater surface impoundments, are not prohibitions from land disposal under §§ 3004(d) through (g), or treatment standards pursuant to § 3004(m). If there is any authority in RCRA for such requirements it does not come from the LDR provisions.⁸

As noted above, EPA has sufficient authority and discretion to delay the effective dates of Phase III and IV as appropriate to avoid confusion and disruption. However, it should be added that EPA also has authority to grant National Capacity Variances under § 3004(h)(2) for the Phase III and IV LDR rules if necessary.⁹

⁷ Clearly, the statute required prohibitions to be effective immediately because Congress set stringent deadlines for promulgating prohibitions. RCRA sections 3004(d)-(g). Treatment standards were to be set on the same date so there would be no gap between prohibitions and the corresponding treatment standards. Here

there will be no gap if the amended treatment standards are not effective immediately, because there are already prohibitions and treatment standards in place.

8 If EPA believes that authority exists for the Option 2 requirements in some part of RCRA other than the LDR provisions, one remaining issue would be whether RCRA § 3010(b) would require the regulations to be effective within six months of final promulgation of the rule. EPA has determined that it has the discretion to stay the effective date of RCRA rules where necessary (as with the Subpart CC rule, see 60 F.R. 50426 (Sept. 29, 1995)). If such a stay is not an option, however, EPA should delay final promulgation of the Phase IV rule until a common effective date can be set for the four rules.

9 Indeed, CMA believes that EPA has discretion to establish longer variances than provided for in section 3004(h). That section provides for variances from land disposal prohibitions, including two years for lack of capacity, and the possibility of two additional years on a case-by-case basis. RCRA Section 3004(m)(2) provides that treatment standards are to become effective on the same date as the relevant prohibitions. EPA should recognize that these limitations do not apply to the contemplated Phase IV requirements.

First of all, as noted above, Phase IV requirements would not be "treatment standards" under Section 3004(m), and thus would not be subject to the Section 3004(h) limits. Second, even if the Phase IV rules could be construed to be treatment standards, a prohibition from land disposal for the hazardous wastes covered by the rule is already in place, as are treatment standards. If Phase IV requirements are promulgated, they will at most modify those preexisting treatment standards. Nothing in the statute says that modifications to treatment standards must become effective immediately, or that they are subject to the limited variance periods set out in Section 3004(h). indeed, it would be logically impossible for modifications to treatment standards to be promulgated at the same time as the corresponding prohibitions. Furthermore, because such modifications are not subject to any Congressionally mandated schedule, it is not reasonable to impose the same limitations on variances for such modifications. Instead, EPA should determine that it has the discretion to grant different and longer variances with respect to treatment standard modifications where appropriate.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March

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DCN PH4P113

COMMENTS Chemical Manufacturers Assn.

RESPONDER PMC

SUBJECT EQUV

SUBJNUM 113

COMMENT

The Chemical Manufacturers Association (CMA) appreciates the opportunity to comment to the United States Environmental Protection Agency (EPA or the Agency) on its proposed Phase IV land disposal restrictions (LDR) rule. 60 Fed. Reg. 43,654 (to be codified at 40 CFR Parts 148, 268, and 271) (proposed Aug. 22 1995). In its proposal, EPA is discussing whether to establish additional disposal practices for the management of formerly characteristic wastes in surface impoundments that are part of a wastewater treatment facility whose discharge is regulated by the Clean Water Act (CWA). The Agency's proposal comes in the aftermath of the D.C. Circuit Court of Appeals decision, *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C.Cir. 1992), cert. denied, 113 S. Ct. 1961 (1992). As we demonstrate in these comments, we do not see anything in the court's decision that requires EPA to change its position on allowing treatment of decharacterized wastewater in centralized wastewater treatment systems. We also concur with the Agency's statements that these practices present little or no risk to human health and the environment, and we demonstrate that the risks the Agency believes may exist, are overstated.

Incidental to the manufacture of chemicals, CMA member companies generate and, after decharacterization, manage formerly characteristic hazardous wastes in centralized wastewater treatment systems that comply with the Clean Water Act. The chemical industry's installation of these systems is based on long-standing Agency policy that has legitimized such practices. Radical changes in the Agency's land disposal restrictions rules could invalidate many existing wastewater treatment systems, and seriously disrupt mandated Clean Water Act upgrades, deepwell injection, and pollution prevention efforts all without commensurate environmental benefit.

In its Phase IV proposal EPA has asked for comments on three proposed options and how the chosen option might need to be modified. Generally, CMA urges EPA to promulgate rules' with the greatest degree of flexibility possible, given the low risks presented by the waste management practices addressed in the rules and the significant costs that could be imposed on industry by unnecessarily rigid regulations. Specifically, CMA strongly

supports the Agency selecting Option 1. EPA's statements and findings regarding the risks posed by such management practices clearly show that this Option is protective of human health and the environment. CMA's comments demonstrate how Option 1 is legally, practically, and environmentally supportable.

CMA believes that Options 2 and 3 are neither lawful under RCRA, nor are they supportable from a policy basis given the low risks posed by decharacterized wastes in CWA surface impoundments. If, however, the Agency decides to choose Option 2, CMA's comments offer suggestions relating to clarifications and modifications which must be made prior to promulgation.

As we demonstrate in these comments, we do not see anything in the court decision's relating to the land disposal restrictions that requires EPA to change its position on allowing treatment of decharacterized wastewater in centralized wastewater treatment systems that are regulated under subtitle D of the Solid Waste Disposal Act and the Clean Water Act. In addition, we concur with the Agency's statements that these practices present little or no risk to human health and the environment, and what risk the Agency believes may exist, is overstated. Thus, we urge The Agency to adopt the first option that it has proposed in the rule.

CMA has previously commented on virtually all aspects of the LDR program. CMA's Underground Injection Control Management Task Group is filing separate comments on Phase IV issues that affect injection wells.

In its Phase IV proposal EPA has asked for comments on three proposed options and how the chosen option might need to be modified. Generally, CMA urges EPA to promulgate rules with the greatest degree of flexibility possible, given the low risks presented by the waste management practices addressed in the rules, and the significant costs that could be imposed on industry by unnecessarily rigid regulations.

Specifically, CMA strongly supports the Agency selecting Option 1, which would rely on the phase III controls to address decharacterized wastes in surface impoundments. CMA believes that Options 2 and 3 are neither lawful under RCRA, nor are they supportable from a policy basis given the low risks posed by decharacterized wastes in CWA surface impoundments.

Indeed, EPA has already recognized the low risks of decharacterized wastes. EPA's Third-third rule would have deferred entirely to CWA treatment for decharacterized wastes, on the grounds that further treatment of those wastes was not required as a policy matter. In EPA's Phase III PROPOSAL EPA pointedly noted

that the practices it was addressing presented little or no risk to human health and the environment and, but for the court's decision, need not be addressed at this time. 60 Fed. Reg. 11,704/2 (March 2, 1995). EPA has continued to state its opinion that Further Regulation of CWA surface impoundments is not necessary. On July 20, 1995, Michael Shapiro, Director of EPA's Office of Solid Waste, testified before the House Subcommittee on Commerce, Trade and Hazardous Materials, in connection with a bill proposed by Rep. Oxley that would, among other things, reinstate much of EPA's Third-third Regulation. Mr. Shapiro pointed out that the risks addressed by the resulting Phase III rule [and thus those addressed by the Phase IV rule as well] "are small relative to the risks presented by other environmental conditions or situations; nevertheless, the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices." Shapiro Testimony at 13, 14. Published reports have stated that Mr. Shapiro stated that he would not oppose the section of the Oxley bill that would reverse the Chem Waste decision as to wastes managed in CWA systems or UIC injection wells. Pesticide & Toxic Chemical News, July 26, 1995, at 13.

EPA's statements and findings regarding the risks posed by such management practices, clearly show that, as a general policy matter, EPA should choose Option 1, which would rely on the phase III standards, that can be met at or prior to the point of discharge, to constitute treatment equivalent to RCRA's LDR requirements. CMA's comments below will demonstrate how that choice is legally supportable, even required, and why it is practically and environmentally supportable as well.

In the Third-Third regulation, EPA integrated RCRA with the CWA by providing that certain characteristic wastes could be aggregated, decharacterized, and then placed in CWA SURFACE impoundments, without the imposition of further RCRA requirements. EPA's integration was rejected in the Chem Waste decision. In that decision, the D.C. Circuit Court of Appeals announced a new "accommodation" that it said was "required" by RCRA §1006. As we noted in our Phase III comments, we believe that the Agency has already proposed implementation of that accommodation in the Phase III rule, and nothing more is needed. See CMA Supplemental Comments on EPA's Phase III rules, July 21, 1995, pp. 1-10. We also do not believe that the Court's accommodation authorizes the options that the Agency has proposed as Options 2 or 3.

But perhaps more importantly, we do not believe that these other

options are needed to protect human health and the environment either. As EPA noted in its Phase III proposal:

First, the risks addressed by this rule . . . are very small relative to the risks presented by other environmental conditions or situations. In a time of limited resources, common sense dictates that we deal with higher risk activities first, a principle on which EPA, and members of the regulated community, and the public can agree.

Nevertheless, the Agency is required to set treatment standards for these relatively low risk wastes and disposal practices during the next two years, although there are other actions and projects with which the Agency could provide greater protection of human health and the environment. 60 Fed Reg. 11,704/2 (March 2, 1995). As we will demonstrate in these comments, even those low risks are overstated, and EPA does not have any basis for establishing technical standards or additional disposal regulations for decharacterized wastes that are placed into land-based treatment units as part of CWA treatment systems.

IV. EPA Should Select Option 1 In the Phase IV Rulemaking

A. EPA Is Required To Select Option 1

CMA believes that RCRA and the Chem Waste decision require EPA to select Option 1. As we explain below: the court's decision requires Option 1 as the required accommodation of the LDRs with the Clean Water Act; the court's holdings on equivalency of treatment do not authorize any further regulations; and EPA lacks jurisdiction under RCRA to impose technical requirements on Subtitle D units managing non-hazardous wastes.

2. The Agency's Newest Theory Regarding Permanent Disposal and Equivalency of Treatment Does Not Support Additional Disposal Requirements

In our Supplemental Phase III comments, we noted that EPA's proposal for the Phase IV RULE is based on a tenuous theory that the Chem Waste decision may require additional disposal practices, in the form of technical standards on land based units, to ensure that Decharacterized Wastes managed in CWA systems are treated in a manner that is equivalent to Decharacterized Wastes in non-CWA systems. See Attachment B: CMA's Supplemental Third-Third Comments, pp. 1-10. In the Phase IV proposal, the Agency offers a new theory for expanding its Subtitle C authority to non-hazardous waste management units. The Agency now believes that the Court decision requires it to inquire whether "such treatment in surface impoundments results in cross-media releases, via leakage, air emissions, or disposal of untreated sludges, [] can be

so excessive that the impoundment effectively functions as a disposal unit." 60 Fed. Reg. 43,555/2. Thus, the Agency's "preferred" reading of the opinion is to "establish the parameters which distinguish permanent land disposal impoundments from those performing the type of treatment to be accommodated under the court's opinion." 50 Fed. Reg. 48,657/2.

In this section, we will reiterate why the requirement of "equivalent treatment" is not sufficient to justify additional regulations and why the new theory of "permanent land disposal" does not extend the Agency's authority to non-hazardous waste management units.

In our previous comments we addressed EPA's theory regarding whether the court's "equivalency of treatment" requirement could allow the Agency to require additional disposal requirements on non-hazardous surface impoundments. See Attachment B: CMA Supplemental Phase III comments, pp. 1 -10. Before addressing EPA's newest theory on "thwarting cross-media transfers" due to "permanent land disposal," we want to reiterate our confusion over why the Agency is trying to stretch its Subtitle C authority over non-hazardous waste units, while also lamenting that these units present a low risk that should not be dealt with at this time. See 60 Fed. Reg. 11,704/2; 60 Fed. Reg. 43,656/2.

EPA relies on miscellaneous passages spread throughout the Chem Waste decision to support its new theory that the Court's holding regarding "equivalency of treatment" authorizes an expansion of the Agency's Subtitle C regulatory authority to non-hazardous waste management units. While the court discusses the need to treat characteristic wastes to comply with the land disposal treatment standards, nowhere does the court express the desire to thwart "cross-media transfers." See 60 Fed. Reg. 43,656/3. In addition, the Court's discussion which distinguishes between "permanent" and "temporary" land disposal arises in a discussion which supports Option 1.

In support of its new theory, the Agency first cites to page 22 of the court's opinion. We note that the only holding on that page is as follows:

Thus, we hold that, whenever wastes are put in CWA surface impoundments before they have been treated pursuant to RCRA to reduce the toxicity of all hazardous constituents, these wastes must be so treated before exiting the CWA treatment facilities. In other words, CWA facilities must remove the characteristic and decrease the toxicity of the waste's hazardous constituents to the same degree that treatment outside a CWA system would. Chem Waste

at 22.(Court's emphasis).

This is hardly a ringing statement mandating that EPA "thwart cross-media transfers." Instead this holding merely states the key, narrow holding of the case: that prohibited characteristically hazardous waste must be treated to LDR levels by the time they leave the non-hazardous waste impoundment. Perhaps the Agency's citation is referring to a passage, that is merely explanatory and not the basis of this holding, that "dilution does not prevent any of the metals from entering the environment." *Id.* at 22. This statement by the Court arises as the predicate to the court explaining the difference between NRDC's concerns and EPA's response. The Court, after including this statement in its issue statement, went on to explain in the next paragraph that The Agency's current "deactivation" treatment standard was not sufficient to meet the LDR treatment standard even though the waste was no longer hazardous. The court stated: "The EPA's rejoinder, that because the wastes being placed in the surface impoundment are no longer "hazardous" they need not be treated, is exactly the argument industry petitioners previously made [regarding point of generation] and EPA rejected. RCRA attaches to "hazardous wastes" that are destined for land disposal facilities and the statute requires complete treatment. *Id.* at 22-23.

Thus, the court's resolution of the issue is not a mandate to "thwart inter-media transfers." Rather it is a part of the holding that all prohibited wastes must receive the same degree of treatment even if they are decharacterized first.

This part of the court's decision actually demonstrates that the Chem Waste court was NOT concerned about thwarting inter-media transfers. Instead, it specifically recognizes that decharacterized wastes would be treated in surface impoundments that did not comply with equivalent RCRA requirements: double liners and leachate collection requirements. In the very next paragraph, the Court explained that decharacterized wastes could be managed differently. The court noted that Congress allowed treatment in surface impoundments of hazardous wastes that did not meet the LDR treatment standards if the surface impoundment met certain conditions, including MTR's. RCRA § 3005(j)(1). However, the court noted that in the case of decharacterized wastes, the treating impoundment did not need to meet these equivalent standards. The court said:

Here, however, the liquids, at the time, they are placed in the surface impoundments, are not technically hazardous wastes

Additionally, the liquids here are only placed in the surface impoundments temporarily; in API, the "land treatment" represented the final resting place of the Hazardous waste. Id. at 24.

Thus the court recognized that the these subtitle D units would not provide the equivalent protections as wastes treated in hazardous waste impoundments. The court's reference to permanence is merely to distinguish CWA treatment impoundments from permanent disposal units, such as landfills (or land treatment, as in API).

If the court was concerned about cross-media transfers, it would not have allowed these decharacterized wastes to be placed into arguably less protective units. instead, the court was merely noting that landfills and land treatment units are intended for the permanent disposal of wastes, whereas surface impoundments that are part of CWA systems are intended for the treatment of such wastes on their way to the CWA point of compliance.

Finally, the Agency cites to two additional instances in the opinion where the court specifically addressed the issue of releases into the environment. In the first instance where the court remanded the Agency's "deactivation" standard for corrosive wastes, the court merely stated that the Agency need not change this standard if it could make a statement, backed by evidence, that deactivated corrosive wastes "do not contain hazardous constituents that pose a threat to human health and the environment. Id. at 18 (emphasis added). A recounting of RCRA's general standard should hardly qualify as a mandate for EPA expanding its Subtitle C authority to non-hazardous waste surface impoundments.

The second reference deals with reactive wastes. In this section, the Court remanded the deactivation standard for reactive wastes, even though no one produced any evidence that these wastes contained hazardous constituents that were not addressed by the deactivation standard(except for reactive sulfides and cyanides which EPA addressed by promulgating a treatment method). The court, however, granted the petition to review on "narrow grounds" for the purpose of the Agency "mandating] preliminary steps to prevent such reactions" and not for the analogous situation of prescribing controls during treatment.

Consequently nothing in the Chem Waste case supports the Agency's newest theory for establishing additional controls on decharacterized wastes that are managed in non-hazardous surface impoundments. In fact, as we demonstrate in the next sections, the Agency is precluded from establishing such requirements.

Accordingly, EPA is limited by both its Subtitle C jurisdiction and by its obligation to accommodate CWA requirements to choose Option 1 and thus refrain from imposing technical requirements on Subtitle D units.

4. EPA Is Free To Select Option 1 Under Chem Waste

Even if EPA were to reject the arguments above that the Chem Waste decision and RCRA require EPA to choose Option 1 in the Phase IV rulemaking, it is quite clear that there is nothing in the court's decision that prevents EPA from selecting Option 1. In the court's discussion of CWA systems, there is not a single mention of sludge, leaks, air emissions, or any other movement of hazardous constituents to the environment other than what exits the CWA system at its point of discharge, even though the court was fully aware that CWA impoundments are typically unlined. *Chem Waste*, 976 F.2d at 20. If the court had intended that Subtitle C impose any such requirements on surface impoundments that manage nonhazardous waste, it surely would have discussed how this decision was either consistent with, or deviated from prior precedent.

As noted above, the Chem Waste court sanctioned the Option 1 approach by making it clear that EPA could meet its obligations under RCRA § 3004(m) by requiring that the §30W(m) standard must be met at the CWA system point of discharge not in the impoundment. As we explained in our Phase 11 comments, the CWA permit or pretreatment requirements, which require at the least, application of the best practicable control technology currently available (CWA § 301(b)), clearly meet that standard. See Attachment A: CMA Comments on Phase III, pp. 12 -16.

The court's litmus test for equivalency is that treatment must meet the requirements of the statute. The court held that: "the new CWA dilution permission is valid where the waste is decharacterized prior to placement in a CWA surface impoundment and subsequently treated in full conformity with § 3004(m)(1) standards." *Chem Waste*, 976 F.2d at 19. The end-of-pipe standards proposed in Phase III fully satisfy that standard, and EPA should go no further.

EPA, however, is considering the argument that the Chem Waste opinion would support a decision by EPA to establish performance standards for surface impoundments that manage nonhazardous wastes so that mass loadings of hazardous constituents to the environment (other than through the CWA outfall) are reduced. CMA does not agree that the court's opinion reaches so far. There is absolutely no discussion of this point in the court's decision, and it requires an anguished stretching of the court's language to find statements that even arguably would support such regulations.

EPA cites a footnote in *Chem Waste*, 976 F.2d at 23 n.8, to support the argument that EPA can impose regulations on the operation of surface impoundments managing nonhazardous wastes. 60 Fed. Reg. 43,656.2 The Agency has asserted that the footnote illustrates the court's fundamental concern that dilution does not reduce or destroy hazardous constituents, and therefore does not prevent them from entering the environment. The Agency then attempts to extrapolate from this a concern on the court's part about "mass loadings" and possible releases through air emissions, leaks, and sludges.

However, the footnote merely points out that a unit treating diluted waste will have to treat a larger volume to remove the same amount of a hazardous constituent than will a unit treating concentrated wastes. The footnote does not use the term "mass loadings" and certainly does not refer to any "loading" to the environment other than at the CWA discharge point.

EPA can point to only a few other statements in the opinion to support an argument that the court authorized requirements more extensive than the Phase III end-of-pipe standards. EPA REFERS to other portions of the opinion that discuss volatilization and dilution of characteristic wastes, 60 Fed. Reg. 43,656 (citing *Chem Waste*, 976 F.2d at 17, 18, 22, 24, 29-30), but these portions did not involve the issue of placement of decharacterized wastes in CWA surface impoundments, and thus did not involve accommodation with the CWA. EPA also points to statements by the court that placement in CWA surface impoundments is "temporary" and not permanent disposal, and thus argues that it can impose requirements to control any aspects of CWA surface impoundment management that might constitute "permanent" disposal, such as air emissions or leaks. 60 Fed. Reg. 43,656 (citing *Chem Waste*, 976 F.2d at 24, 95). As EPA implicitly notes in the permeable, this argument turns the court's opinion on its head. 60 Fed.Reg. 43,657/2. The court's statement that placement in a CWA surface impoundment is temporary is more reasonably interpreted as recognition by the court that some leaks and air emissions are possible from an unlined impoundment (see *Chem Waste*, 976 F.2d at 20), but that this is acceptable because of the need to accommodate the CWA. The court intended that the compliance of the CWA impoundments be controlled not by management standards, but by end-of-pipe compliance with treatment standards.

2 The footnote reads, in its entirety, as follows:

To illustrate RCRA's focus on treatment of the hazardous

constituents in a waste, consider a waste stream hazardous by characteristic for cadmium. Both the characteristic and treatment levels for the hazardous waste are 1.0 mg/l. Assume that a stream of 3.0 mg/l daily deposits 1000liters into a treatment facility. A RCRA treatment facility would remove at least 2000 mg of cadmium from the waste stream. A CWA treatment facility must do the same although to do so it will have to process at least three times as much water (because dilution of 1000 liters of 3.0mg/l to just below the characteristic level will yield just over 3000 liters). Allowing dilution alone would decharacterize the waste, but it would not reduce the total amount of cadmium entering the environment. One thousand liters of 3.0 mg/l cadmium yields the same amount of hazardous constituent as 3000 liters of 1.0 mg/l cadmium.

Accordingly, nothing in RCRA or in the Chem Waste decision precludes EPA from selecting Option 1 in the Phase IV rule, and for the reasons set out below, EPA should do so.

C. Other Statutes And Regulations Provide Adequately Regulate the Surface Impoundments In question So That Human Health And The Environment Is Protected.

There are numerous statutes and regulations that govern the protectiveness of the surface impoundments at issue in the Phase IV rule. EPA should not disturb the statutory scheme established by Congress to protect human health and the environment by imposing additional requirements on these surface impoundments.

1. The Imposition of Air Emissions Requirements In The Phase IV Rule Is Unjustified.

There is little reason for EPA to regulate, under the LDR program, air emissions from CWA surface impoundments. With respect to the potential air emissions that would be addressed under Option 2 of the Phase IV rule, there are already in place numerous requirements that limit air emissions from CWA surface impoundments, and others are in development.

In order to maintain, to the greatest extent possible, a consistent approach to air pollution control, air emissions should be regulated under the Clean Air Act (CAA), not under RCRA. Therefore, CMA urges EPA to defer to preexisting and scheduled requirements under the Clean Air Act, and refrain from creating further duplicative and overlapping air emission requirements under the aegis of RCRA. CMA thus believes that no air emissions requirements should be imposed under Phase IV, because

such requirements are unnecessary to minimize threats to human health and the environment from CWA surface impoundments. In the CAA, Congress has established a comprehensive scheme for regulating air emissions that represents a delicate balance between protecting human health and the environment using a best technology approach, risk assessment, and rule scheduling that ameliorates some of the economic impact resulting from the new requirements. Emissions of hazardous air pollutants (that equate to the toxic constituents EPA is concerned within the Phase IV rule) are subject to extensive regulation under Section 112 of the Clean Air Act. While not all of the RCRA hazardous constituents are HAPs, the list of HAPs is extensive enough and represents Congress' decision that control of these constituents are all that is necessary to protect human health and the environment.

Section 112 requires EPA to promulgate emission standards for industrial source categories with respect to nearly two hundred hazardous air pollutants (HAPs), establishing Maximum Achievable Control Technology ("MACT") for such categories. Many facilities operated by CMA members are already covered by the HON ("Hazardous Organic National Emission Standards for Hazardous Air Pollutants") regulation, promulgated on April 22, 1994 (59 Fed. Reg. 19,402) or by the Benzene NESHAP, promulgated on January 17, 1993. MACT standards for other industrial source categories will be promulgated by EPA according to a statutorily-imposed schedule, which represents Congressional balancing regarding how the nation should absorb the costs of such additional regulation. These rules will cover some 70 additional chemical production or manufacturing source categories and the off-site waste and recovery operations category. 59 Fed. Reg. 51,913 (Oct. 13, 1994). These regulations, taken together, place stringent controls on the emissions of hazardous air pollutants from the manufacturing industry in an orderly process that is Congressionally mandated. Additional MACT standards will address treatment of generated wastewaters to control hazardous air F, pollutant emissions. Since regulations cover all major sources of hazardous air pollutants within a relevant source category and there is simply no justification for imposing duplicative requirements under RCRA.

Congress also required EPA to review residual risk as part of the overall program to control HAP emissions under the CAA. The results of this review may strengthen already promulgated MACT standards, if necessary to further protect public health. The strengthening of a MACT standard will likely result in tighter emissions limits

for wastewater treatment units. Moreover, EPA is required to list, and regulate, categories of area sources if they present a threat of adverse effects to human health or the environment warranting regulation. EPA is also required to review residual risk for these area source categories.

Furthermore, the provisions of the Clean Air Act governing nonattainment areas (CAA §§ 171-193) may also overlap with the proposed RCRA air emissions requirements. Those requirements impose limitations (including the use of Reasonably Available Control Technology, or "RACT") on emissions from existing major air pollution sources in areas that have not attained established air quality standards. For example, EPA has already released Control Technique Guidelines establishing RACT for many industrial operations, including the Synthetic Organic Chemical Manufacturing Industry, EPA 450/3-84-015, December 1984, (Group III) NTIS No. PB-85-164 #275.

Finally, new or modified facilities may be subject to several requirements under the CAA: For certain industries, EPA has promulgated New Source Performance Standards under § 111 of the Clean Air Act, imposing specific requirements on all new, modified or reconstructed facilities within the industrial category. For areas in compliance with air quality standards, §§ 160-169 of the Clean Air Act, governing Prevention of Significant Deterioration, require new or modified sources to install the Best Available Control Technology ("BACT"); For nonattainment areas, §§ 171-193 require new and modified sources to apply technology that achieves the Lowest Achievable Emissions Rate ("LAER").

Clearly, this comprehensive regulatory scheme is all that is needed to control air emissions from nonhazardous waste surface impoundments handling formerly characteristic wastes

It should also be noted that states may, and often do, impose air regulations that are both broader in applicability and more stringent than those required under the federal Clean Air Act. For example, Texas, New York, and California all have such requirements.

The capital and manpower investments that a facility would have to make to remain in compliance with simultaneous CAA and RCRA regulations addressing similar air emissions from wastewater are not justifiable. Some facilities are already, or will soon be, subject to federal, state, and local regulations governing air emissions. Thus, EPA should continue to address the control of air emissions through CAA authority as opposed to generating separate RCRA-authorized regulations.³

2. Leaks Detection Requirements Are Not Necessary.

There are already in place significant federal and state regulations that either reduce the likelihood that CWA surface impoundments will leak or that ensure leaks are detected and addressed.

First, there are a number of other RCRA regulations that address CWA impoundments managing non-hazardous wastes. At facilities that are RCRA-permitted or interim status TSDFs, RCRA's corrective action requirements apply to all SWMUs, including these CWA surface impoundments. We estimate that at least 25% of the surface impoundments EPA estimates will be impacted by this rule are in fact, covered by RCRA's corrective action provisions.

Many companies, including CMA members, are in fact pursuing corrective action for such SWMUs. Furthermore, RCRA § 7003 allows EPA to take action when management of any solid or hazardous waste "may present an imminent and substantial endangerment to health or the environment." Clearly, this provision could be invoked to prevent endangerment resulting from CWA impoundment leaks.

3 If EPA decides to impose air emission requirements under Phase IV, CMA agrees that EPA SHOULD exempt from such requirements any surface impoundments that are already addressed by relevant requirements under other statutes or regulations. See discussion below in Section VI A. Item #10 of these comments.

Second, there is a strong incentive for all owners and operators of surface impoundments to ensure that there is no leakage of hazardous constituents, because of the risks of CERCLA liability and the tremendous costs (including natural resource damages) that can result. 42 U.S.C. §§ 9606, 9607. CERCLA requires the reporting of releases of hazardous constituents above specified reportable quantities. 42 U.S.C. § 9603. In addition, leakage of hazardous constituents can lead to major common law tort liability. See, e.g., *Davey Compressor Co. v. City of Delray Beach*, 639 So.2d 595 (Fla. 1994); *Ewell v. Petro Processors of Louisiana, inc.*, 364 So.2d 604 (C.A. La. 1978), cert. denied 366 So.2d 575 (La. 1979).

Finally, as Congress intended, States are taking the lead in regulating non-hazardous Waste Management units. For example, states (such as California and Louisiana) have in place regulations addressing Subtitle D disposal units that, in many cases, impose requirements intended to limit leakage. Other states have other regulations that would control leakage from such impoundments, such as state NPDES permits that control releases to groundwater (as in Texas). As revealed by studies performed by CMA, many states have programs in place addressing leak prevention and detection, as they

determine necessary. See Attachment D: Study of State industrial Non-Hazardous Waste Regulatory Programs: 25 State Profiles. (April 1994); Study of state Subtitle D Regulatory Program Status (September, 4, 1991).

Many states also have sole source aquifer or wellhead protection programs under the Safe Drinking Water Act that protect groundwater. State support for the exemption of Decharacterized Wastes, as managed under the Clean Water Act equivalent treatment systems, and injected into UIC Class I nonhazardous injection wells under the Safe Drinking Water Act, from meeting additional LDR requirements is demonstrated in letters from the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the Ground Water Protection Council (GWPC) to congressional representatives.

3. Sludge Requirements Should Not Be Imposed In Phase IV.

CMA also believes that it is unnecessary for EPA to impose additional regulations on sludges as part of the Phase IV rule.

Before sludges are removed from the impoundment, they do not pose a risk any different from leaks, and are adequately addressed by existing measures controlling leaks. As EPA commented, "EPA does not believe in-place sludges would be a release pathway separate from the leaks pathway." 60 Fed. Reg. 43,673. Thus the management of sludge should be governed by a determination, at the time of removal, of the controls appropriate to protect human health and the environment. 60 Fed. Reg. 43,673/3

Accordingly, EPA should not include sludge requirements in the Phase IV regulations.

D. The Chem Waste Decision Precludes EPA From Selecting Option 3 In The Phase IV Rulemaking

Under the Chem Waste decision, EPA is clearly not permitted to select Option 3 in the final Phase IV rule, which would require treatment of decharacterized wastes to UTS standards before placement in a CWA surface impoundment. Option 3 would eliminate any accommodation of the CWA in the LDR program, because the CWA surface impoundments would be treated like any other Subtitle D impoundments.

As noted above, the Chem Waste decision held that accommodation with the CWA is required "to the maximum extent practicable." Chem Waste, 976 F.2d at 20. The court also made it clear that placement of decharacterized wastes in CWA surface impoundments prior to satisfying UTS standards was acceptable, and a reasonable accommodation with CWA. For EPA to choose an option under which there was no accommodation with the CWA would violate RCRA § 1006

and the court's decision.⁴

VI. If EPA Insists On Selecting Option 2 In The Phase IV Rulemaking, Significant Clarifications And Modifications Are Needed
As discussed previously in these comments, CMA believes EPA is required by the Chem Waste decision to select Option 1, or at the very least is not precluded from choosing Option 1. However, if EPA decides to select Option 2 in the Phase IV rulemaking, several Clarifications And modifications must be made prior to promulgation. Further, as noted above, the upcoming HWIR rule will make significant changes in the Subtitle C program that would have important implications for the Option 2 requirements. When this is coupled with the fact that EPA has not proposed regulatory language for Option 2, CMA believes that if EPA plans to choose Option 2, that it should repropose the requirements for further comment after the HWIR rule is finalized.

Although CMA's ability to comment adequately is hampered by the absence of proposed regulatory language, the following are specific comments on the elements of Option 2.

A. EPA Must Modify The Applicability of Option 2

1. EPA Should Change Option 2 Applicability Shown In the Preamble Figures.

Attached to this document are two figures Figure A: EPA's Proposed Applicability Criteria, and Figure B: CMA's Proposed Applicability Criteria. (See Attachments E and F) The two figures are composites of the Option 2 figures in the preamble (Section I.H.)

presenting general applicability (EPA Fig. 1), air emissions management applicability (EPA Fig. 2), leak management applicability (EPA Fig. 3) and sludge management applicability (EPA Fig. 4). We will use these two figures to compare and contrast our suggestions with EPA's proposal. The item numbers associated with these comments match those in Figures A and B.

a) EPA should grant a general applicability exemption for Wet Weather Flow Impoundments. (Item #1)

Many facilities utilize integrated sewer systems in which both process wastewaters and storm waters are managed in the same collection system. Wet weather flow impoundments are commonly used in integrated sewer systems to temporarily store excess water flows during storm events. Water diverted to these impoundments are either transferred to the wastewater treatment system at controlled rates or directly discharged through a permitted outfall to a receiving waterbody or to a POTW.

CMA recommends that wet weather flow impoundments be exempted from the LDR Phase IV regulations due to their low environmental risk,

their importance to the efficient operation of wastewater management systems, and the significant cost of replacing and/or closing the impoundments.

Wet weather flow impoundments pose an inherently low environmental risk since:

Underlying Hazardous Constituents (UHCs) in the wet weather flow impoundment influent rarely exceed UTS and then only for very short periods of time. Such exceedances may occur during the beginning of a storm event when the proportion of process wastewater to stormwater is at the greatest. Peak storm event flows will be primarily stormwater, with the result that the flow-rated average concentration of UHCs in the impoundment influent during a storm event will be significantly below the UTS levels.

Wet weather flow impoundments are generally empty, so the residence time of any UHCs present in the impoundments is short. This further reduces the potential for leakage to groundwater and air emissions. This clearly classifies as the kind of temporary containment that EPA believes the court determined could occur in subtitle D units

The use of wet weather flow impoundments is vital in the operation of combined process wastewater/stormwater management systems since temporary storage of the large amounts of water associated with a storm event is essential in preventing exceedance of the system's collection and/or treatment capacity. For example, a hydraulic overload in a biological treatment system will reduce organic removal efficiency and cause exceedance of total suspended solids effluent limits.

Closing and replacing wet weather flow impoundments would be prohibitively expensive. Impoundment closure would be extremely expensive since at some facilities these impoundments cover more than 25 acres. Removing the impoundments from service would require the facility to do one or more of the following extremely expensive steps:

Replace the impoundments with a vast stormwater storage tank system to manage the large volume of storm/process water.

Significantly enlarge the capacity of the wastewater transfer system downstream of the point where stormwater is currently diverted to the impoundments AND significantly enlarge the treatment system capacity to manage peak flows that will only occur during storm events.

Segregate the process wastewater from stormwater which, in many cases, would be prohibitively expensive due to the size and location (under operating units) of sewer systems in

well-established industrial complexes.

Therefore, EPA should grant a general applicability exemption for wet weather Flow Impoundments.

d) Surface impoundments subject to RCRA corrective action provisions should be exempt from all Phase IV management standards. (Item #4)

CMA agrees with EPA that permitted TSDFs should be totally exempted from Phase IV REQUIREMENTS since any of their subtitle D impoundments are subject to corrective action. During the RCRA Part B permitting process, all Subtitle D wastewater surface impoundments receiving hazardous waste constituents are evaluated to determine if they are causing unacceptable environmental impact via emissions to the air, runoff to surface waters, and seepage into the soil and ground water. Such evaluations determine if any additional monitoring and/or corrective action is needed for the impoundments on a case-by-case basis. These evaluations and subsequent later activities, as needed, assures that the impoundments are being operated in an environmentally acceptable manner.

CMA also believes that TSDFs currently and previously under interim status should be provided the same total exemption as permitted TSDFs since the same amount of SWMU evaluations with follow-up monitoring and/or corrective action, as needed, will be conducted during the Part B permitting process or can be conducted under § 3008(h). CMA does not believe it to be practical to force interim status facilities to comply with Phase IV requirements if the regulatory agency has the authority to evaluate the facility and to request site-specific corrective action measures based on those evaluations and any further monitoring.

Thus, CMA recommends that wastewater surface impoundments located in all facilities covered by RCRA TSDF corrective action provisions be automatically exempted from all Phase IV management standards.

e) EPA should clarify the MTR exemption requirements and not require ground water monitoring.(Item #5)

The preamble states that the MTR exemption is applicable if the "decharacterized Wastes Are discharged to a surface impoundment that meets the substantive minimum technology requirements of 40 CFR 268.4". 60 Fed. Reg. 43,669/1 (emphasis added).

CMA believes that the phrase "substantive minimum technology requirements" should only refer to subsection (I) of § 268.4(a)(3). Limiting the substantive MTR requirements to these would (1) eliminate the need to conduct ground water monitoring, which is

one of the purposes of the exemption; and, (2) provide flexibility in the design and operation of the impoundment[221(c), (d) or (e)] while staying within the spirit of complying with MTR requirements.

Thus, CMA recommends that EPA limit the "substantive minimum technology requirements" to the design and operation of the impoundments and not require ground water monitoring.

f) CMA agrees that surface impoundments that meet the no migration standard should be Exempted. (Item #6)

CMA concurs that the "no migration" exemption should be a general applicability exemption. To successfully demonstrate "no migration" one must show that actual or predicted concentrations of hazardous concentrations or emission rates at the edge of the land-based unit do not exceed health-based or environmental-based levels for ground water, surface water, soil and air. Thus, all emission concerns are addressed for the wastewater surface impoundments that are eligible to obtain a "no migration" determination.

g) EPA should adopt a "de minimis" exemption patterned after the laboratory exclusion and provide optional limits on either flow or concentration of UTS constituents. (Item #7)

The Agency has proposed to extend "de minimis" provisions it proposed in the Phase III rulemaking for UIC waste systems to CWA systems. As we commented in our Phase III Comments, we support a de minimis volume exclusion for CWA and CWAE systems. See Attachment A: CMA Phase III Comments at pp. 32-33. We suggest that instead of using the exclusion that they proposed for UIC wells, EPA should model the CWA or CWAE exclusion after the current de minimis exclusion for laboratory wastes. Id.

We note that the flow limitation in EPA's proposal is consistent with the laboratory waste exclusion provided under § 261.3(a)(2)(iv)(E). Likewise, limiting the concentration of constituents in an excluded waste seems reasonable and concentration limitation is also a provision of the § 261.3(a)(2)(iv)(E) exclusion although we disagree with the level EPA is proposing and suggest 1 ppm instead.

However, CMA questions why the Agency has abandoned the long-standing logic of the laboratory wastes exclusion under § 261.3(a)(2)(iv)(E) by proposing to require that an excluded waste to meet both criteria to qualify as an excluded waste stream instead of either criteria, as allowed in § 261.3. That logic, unchallenged by the Court decision, continues to hold and should be

extended here. As long as the waste flow is small (i.e., less than 1% of the total wastewater flow for all characteristic wastes), the concentration of constituents in that small flow should not matter as long as the resultant mixture does not exhibit a characteristic of hazardous waste. Conversely, as long as the concentration of constituents is small in the streams being aggregated, the percentage of total flow they comprise should not matter. The fact that a percentage or a concentration restriction precludes any sizable waste streams from qualifying for the exemption unless they pose little hazard provides the Agency with adequate assurance that the provision cannot be abused by the regulated community.

As we noted in our Phase III comments, some may question whether the laboratory waste exclusion represents an analogous situation, since laboratories usually generate small quantities of listed wastes. We think that such an objection would be irrelevant. At facilities that treat a large amount of wastewater the Agency's exclusion could allow a laboratory to send large quantities of concentrated listed waste to the treatment facility, without any restriction on the amount of waste it can send in any one event. Thus the Agency has already determined that there are some situations where the quantities or potential impact is so small that an exclusion is warranted. CMA urges EPA to adopt a similar exclusion for all characteristic wastes. Please see our Phase III COMMENTS for proposed regulatory language.

j) The CAA applicability exemption should embrace additional CAA regulations. (Item #10)

CMA recommends that the applicability of the following groups of air regulations be eligible for determining if the surface impoundments need to be covered by Phase IV air emission management standards. Applicable promulgated and proposed New Source Performance Standards (NSPS) under 40CFR Part 60. One example is the proposed NSPS for SOCMW Wastewaters (Subpart YYY). This regulation will address the control of volatile organic compounds (VOCs) which EPA believes "is an appropriate measure for determining when potential releases through air emissions would be excessive." 60 Fed. Reg. 43,665/1. Note: The preamble also states that "EPA would defer to standards regulating total volatile organics, as adequately covering air emissions of UHCs from this type of treatment" 60 Fed. Reg. 43,660/2. We concur with EPA's intent.

Applicable promulgated and proposed National Emission Standards

for Hazardous Air pollutants (NESHAPs) under 40 CFR Part 61. One example is the NESHAP for Benzene Waste Operations (Subpart FF). This regulation addresses the control of benzene emissions from surface impoundments.

Applicable promulgated, proposed and future MACT regulations 10 required under CAA §112 (40 CFR Part 63). These include all MACT regulations that have been listed pursuant to CAA § 112 and subsequently scheduled according to CAA § 112(e). These promulgated, proposed and near future regulations address the control of hazardous air pollutant (HAP)emissions from wastewater streams. Examples include the promulgated SOCFI Hazardous Organic NESHAPs (HON) which addresses the control of organic HAP emissions from wastewater streams, the proposed MACT regulations covering off-site waste and recovery operations (Subpart DD), and future MACT regulations covering publicly-owned wastewater treatment facilities and site remediation. Note: The preamble states that "facilities subject to CAA standards for hazardous air pollutants (in particular, those promulgated pursuant to CAA 112) in the near future thus would not be covered by Option 2 air emission controls"(Id. at 43660/1).

Facilities which have already addressed the need for control of secondary emissions as part of the CAA Title V program which requires States to conduct case-by-case MACT determinations for facility modifications, reconstructions and ne constructions for major sources if the applicable MACT regulation(s) have not been established. (CAA § § 112(g)and (j)).

10 Pursuant to CAA Section 112(e) EPA must promulgate MACT standards for all source categories by the year 2000. The attached list details the exorbitant number of MACT standards scheduled to be promulgated by EPA between now and the year2000 and likely to apply to the chemical industry (See Attachment G).

Facilities covered by Federally-approved State/Tribal programs which address HAP emissions. (CAA § 112(1)) Such facilities will need to comply with regulations that are essentially equivalent to federal MACT standards developed by EPA.

Facilities covered by Federally-approved State/Tribal Implementation Plans (SIPs) that require control of VOC emissions (CAA §182). Such facilities are required to use Reasonably Available Control Technology (RACT).

In sum, EPA should expand the air regulation exemption to include facilities covered by(1) applicable promulgated and proposed NSPS; (2) applicable promulgated and proposed NESHAPs (Part 61); (3)

applicable promulgated, proposed and future MACT-based regulations(Part 63); (4) Title V case-by-case MACT determinations; (5) Federally-approved State HAP programs; and, (6) Federally-approved SIP plans addressing VOCs.

k) There should be an exemption for hazardous constituents covered by EPA Regional, State or tribal programs that specifically address emissions of those constituents. (Item #11)

CMA concurs with the following statement in the preamble: EPA Regional, State, or Tribal limits which control releases of specific UHCs [regulated constituents] from impoundments also would be considered controlling and so make Phase IV controls unnecessary. 60 F.R.. 43661/1.

CMA recommends that EPA include an exemption for those regulated hazardous constituents that are covered by EPA Regional, State or Tribal programs that specifically address emissions of those constituents.

l) Post-biological surface impoundments should be exempt from air emissions management standards. (Item #12)

Those surface impoundments that are used to clarify or store biologically treated wastewaters prior to discharge through a NPDES-permitted outfall will have low levels of dissolved organics in the water. For example, Commodity Organic Chemical facility outfall wastewaters must have a maximum monthly average BOD5 concentration of no greater than 30ppmw (40 CFR §§ 414.61 & 414.64). This effluent concentration translates to a Total Organic Carbon (TOC) concentration in the order of 150 ppmw. Such a level of TOC will likely have a VOC concentration below 100 ppmw since the organics in the treated water will be refractory organics which will have relatively low vapor pressures. Thus, there is no need for any form of air emission control for such impoundments since the emission rate of VOCs would be inherently low.

CMA recommends EPA to provide an exemption from air emissions management standards for post-biological surface impoundments that store or clarify treated wastewaters prior to discharge through a NPDES-permitted outfall.

m) EPA should clarify Subpart CC before requiring surface impoundments to comply with it.(Item #13)

The Subpart CC regulations have raised numerous comments from industrial and waste treatment groups, such as CMA, that could impact the applicability of these rules to surface impoundments affected by Phase IV. The concerns are important enough to warrant litigation by affected parties unless current negotiations generate mutually agreeable modifications to the regulations.

Establishing the VOC trigger level at 100 ppmw at the point of generation.

Eliminating those organic compounds that are not VOCs from waste determinations.

Using the first potential exposure point as the point for waste VOC determination

A treatment alternative requiring 95% mass reduction and an exit concentration of less than 50 ppmw (impacts applicability of downstream impoundments).

Lack of acknowledgment of the existence of non-hazardous wastes in calculating organic removal requirements (impacts applicability of downstream impoundments).

The need to consider treatment time when conducting compliance sampling (impacts applicability of downstream impoundments).

We also note that EPA issued a Federal Register notice on August 14, 1995, 60 Fed. Reg. 41,870, which addressed what analytical methods and procedures may be used to determine the VOC of a given waste stream. Until this issue is resolved, no facility will be certain as to what analytical methods and procedures will be available to them to determine if the extended Subpart CC regulations are applicable for a given impoundment.

CMA does not believe that it is prudent to require facilities to comply with significant requirements that may well prove to be unnecessary when the regulations are truly clarified. CMA recommends that EPA place the questions governing whether wastewater surface impoundments comply with Subpart CC regulations on hold until all pending regulatory changes to the Subpart CC regulations are completed.

n) EPA should exempt surface impoundments from ground water monitoring and corrective action if a State or Tribal program has determined it is not necessary. (Item #14)

CMA believes that a facility should be relieved from ground water monitoring and/or corrective action requirements if a State or Tribal program has already determined that such is not required for a given surface impoundment. Such State or Tribal programs will have already determined that various factors (impoundment construction, local geology, local ground water usage, etc.) are such that the surface impoundment is inherently safe and does not warrant monitoring and/or corrective action. It would appear to be a waste of time, manpower and capital to require the facility operator to perform such activities in the name of Phase IV compliance.

Therefore, EPA should provide an exemption from the ground water

monitoring and/or corrective action requirements if a State or Tribal program has determined that such is not required for the given wastewater surface impoundment.

o) EPA should exempt certain constituents from ground water monitoring and corrective action if they are covered by a State or Tribal ground water protection program that is substantially similar to the EPA program. (Item 15)

CMA concurs with the following statement in the preamble:

Many states have ground water protection programs that include ground water monitoring and corrective action that may apply to the types of units that EPA is covering in today's proposal. To the extent that state programs require ground water monitoring and corrective action that include the UTS constituents of concern (or can be modified to cover those constituents) and are substantially similar to today's proposal (i.e., frequency of monitoring, requirements regarding ground water monitoring wells), EPA would defer to those State and Tribal Programs. 160 Fed.Reg. 43,669/3] EPA should, therefore, include an exemption from the leak management standards for those regulated constituents that are covered by a State or Tribal ground water protection program that is substantially similar to the EPA program.

p) EPA should exempt surface impoundments from ground water monitoring and corrective action if the facility has an existing voluntary program that is substantially similar to the EPA program. (Item#16)

CMA concurs with the following statement in the preamble:

Further, facilities affected by today's rulemaking that have existing ground water monitoring and corrective action programs that are not required by State or federal government may be able to continue those programs in lieu of the regulations proposed here. (60 Fed. Reg. 43,669/3)

EPA should allow those facilities that have existing, voluntary ground water monitoring and corrective action programs that are substantially similar to the EPA program to be exempted from the leak management standards.

q) EPA should reaffirm that sludges removed from Subtitle D surface impoundments are not subject to LDR unless they are hazardous. (Item #17)

In the preamble EPA states that the generation of sludges is a new point of generation where the applicability of LDR standards needs to be evaluated.

This is because generation of sludges is usually a new point of generation at which the newly-generated waste is reevaluated to

determine if it is subject to the LDR standards. If non-hazardous, the sludges would not be so subject (i.e., would not be prohibited wastes). See 55Fed. Reg. 22,661-62. (Id. at 43,673/3).

There is no reason why EPA should refrain from applying the above policy to sludges removed from Subtitle D wastewater surface impoundments. Thus, EPA should reaffirm that the applicability of LDR requirements to sludges removed from Subtitle D wastewater surface impoundments is solely dependent on whether or not the removed sludge is characteristically hazardous.

b) Applicability of potential approaches to "Industrial D" management units.

CMA supports EPA's statement that the proposed Phase IV LDR requirements would not necessarily set a precedent for any future regulations regarding surface impoundments managing nonhazardous industrial waste. Putting aside the question of whether the Agency even has the authority to establish such requirements by rule, CMA agrees with the Agency's current approach, which is to address such units by means of voluntary guidelines that would be developed by EPA, States, and affected stakeholders. CMA has accepted EPA's invitation to participate in one EPA/ASTSWMO Industrial Non-Hazardous Waste Initiative, and looks forward to that initiative moving forward in the near future.

B. EPA Should Modify The Leak Control Requirements In Option 2.

1. EPA should not impose leak control requirements on facilities subject to other programs addressing groundwater quality.

CMA agrees with the Agency's proposal to defer to state programs that require groundwater monitoring and corrective action provisions that include the UTS constituents concern (or which can be modified to cover those constituents). However, CMA also believes that where a state program has made a determination that, due to site-specific conditions, (such as impoundment construction, local geology, or groundwater usage), monitoring or corrective action should not be required, the Agency should defer to such a determination, without regard to the specific UTS constituents that might be present in the impoundment. Such a site-specific determination under a state groundwater protection program, based upon specific data and local expertise, is protective of human health and the environment, and should not be trumped by the more general requirements of Phase IV.

2. CMA agrees with the sequential approach to leak requirements under Option 2.

CMA agrees with the Agency's sequential approach to leak control

requirements as set out at 60 Fed. Reg. 43,666. This approach establishes a logical sequence of monitoring, detection, and correction mechanisms, with more burdensome requirements only being triggered when necessary. CMA also agrees with EPA's proposal that facilities would have the option to avoid groundwater monitoring requirements by pretreating wastes or by managing sufficiently dilute wastes.

3. CMA supports proposed exemptions from the Option 2 groundwater monitoring requirements.

CMA agrees that certain units potentially impacted by the Phase IV rule, such as biological and post-biological units, are highly unlikely to pose risks of groundwater contamination, and should be exempt from groundwater monitoring requirements.

4. CMA supports the use of site specific factors in determining the best method of installing monitoring wells.

The Agency has requested comment as to whether site specific factors, such as the physical layout of an impoundment system, should be considered in designing a well monitoring system to address leakage. CMA agrees that such considerations are appropriate. A number of member companies have impoundments that are separated only by a berm system, and installation of wells up and down gradient of each individual unit would be problematic in those cases due to the difficulty of access for drilling equipment. Additionally, since the intent of monitoring is to identify situations which may impact groundwater receptors, any configuration of wells which includes monitoring of groundwater between the impoundment system and receptor is adequate to meet the need.

5. CMA agrees with the Agency's proposal to trigger additional requirements for impoundments only when leakage poses a risk to receptors but believes the appropriate levels of contaminants in groundwater should be based on site specific factors.

The Agency has proposed that further actions beyond monitoring would not be required unless a drinking water exceedance is detected by monitoring. CMA agrees that tangible evidence of a release which is of concern should precede capital and operating cost incurrence, and that any such determination be based on site-specific factors.

7. CMA agrees with the Agency's assessment that alternatives to groundwater monitoring should be allowed and requests that the Agency finalize this guidance prior to promulgation of the Phase IV regulations.

EPA has correctly observed that there are situations where

alternatives to ground water monitoring should be allowed, such as when ground water monitoring is not practicable or would not detect early releases. The Agency has noted it is preparing a rulemaking to deal with those situations, but the inference is that that rulemaking will follow this one rather than being developed concurrently. Subjecting facilities to groundwater monitoring that is ineffectual in advance of the referenced rulemaking is an unnecessary economic burden. EPA should delineate which situations will fall into this category prior to finalizing this rule and defer the monitoring provisions under this rule for those units.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P113
COMMENTS Chemical Manufacturers Association
RESPONDER SS
SUBJECT EQUV
SUBJNUM 113
COMMENT

CMA appreciates the opportunity to submit comments regarding EPA's proposed Phase IV Land disposal restrictions rule. In its proposal, EPA is discussing whether to establish additional disposal practices for the management of formerly characteristic wastes in surface impoundments that are part of a wastewater treatment facility whose discharge is regulated by the Clean Water Act (CWA). The Agency's proposal comes in the aftermath of the D.C. Circuit Court of Appeals decision, *Chemical Waste Management v. EPA*, 976 F.2d 2 (D.C. Cir. 1992, cert. denied, 113 S.Ct. 1961 (1992) [hereinafter *Chem Waste*]). As we demonstrate in these comments, we do not see anything in the court's decision that requires EPA to change its position on allowing treatment of decharacterized wastewater in centralized wastewater treatment systems. We also concur with the Agency's statements that these practices present little or no risk to human health and the environment, and we demonstrate that the risks the Agency believes may exist, are overstated.

As we have pointed out in previous comments, the chemical industry's reliance on centralized wastewater treatment systems is based on long-standing Agency policy that legitimized the aggregation of decharacterized wastes for management in centralized wastewater treatment systems regulated by the Clean Water Act. See Attachment A, pp. 13-14 and Attachment B, Excerpts from CMA Comments on EPA's March 2, 1995 Proposed Rule Regarding Land disposal Restrictions For Decharacterized Wastewaters, Carbamate and OrganoBromine Wastes, and Spent Potliners, pp.6 - 8. Radical changes in the Agency's land disposal restrictions rules could invalidate many existing wastewater treatment systems, and seriously disrupt mandated Clean Water Act upgrades, deepwell injection, and pollution prevention efforts and as the Agency recognizes all without commensurate environmental benefit.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which

initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P113
COMMENTS Chemical Manufacturers Association
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SUBJECT EQUV
SUBJNUM 113
COMMENT

1. The Chem Waste Decision Requires EPA To Select Option 1. CMA believes that EPA should not enact any further regulations under Phase IV. The Chem Waste court recognized that § 1006 of RCRA requires accommodation with the CWA "to the maximum extent practicable." Chem Waste, 976 F.2d at 23 and established a carefully crafted accommodation between the LDR program and CWA requirements. The court made it clear that RCRA "requires some accommodation with the CWA," and satisfying RCRA treatment standards at the point of CWA discharge is sufficient to satisfy RCRA § 3004(m) requirements. Chem Waste, 976 F.2d at 20. Thus, any further regulation of CWA surface impoundments is prohibited by the court's decision, because any such regulation would not accommodate the LDR requirements and the CWA "to the maximum extent practicable."

The court understood that imposing technical requirements under RCRA on such units would seriously disrupt CWA activities because the surface impoundments in question were Subtitle D units managing non-hazardous wastes and should not be subject to RCRA regulation. Id. at 24. See also next section of comments. As a result, the court authorized an accommodation that did as little violence as possible to CWA operations.

CMA urges the Agency to promulgate a final rule that tracks the specific accommodation authorized by the court in order to avoid the risk that a different accommodation could again be struck down, further delaying the LDR program.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface

impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P113
COMMENTS Chemical Manufacturers As
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COMMENT

The Agency's second citation is to page 24 of the court's opinion. Again, it is not clear exactly what passage the Agency is referring to on that page. Since the Agency ties its new theory for supporting its "preferred reading" of the court's opinion to the concept of permanent land disposal, perhaps it is the court's truncated and not very illuminating discussion of permanent disposal to which the Agency refers. *Id.* at 24. CMA believes that rather than being rationale for the Agency to broaden its Subtitle C authority to nonhazardous waste management units, the court's discussion justifies why the Agency can allow placement of prohibited wastes that do not meet the land disposal restrictions into a land based, nonhazardous waste management unit without further regulation. It is ironic that the Agency would take a passage from the opinion that supports treatment in non-hazardous waste management units, and try to turn it into the basis for regulating these units even though the risk from such management is low.

After describing the accommodation that EPA is required to make between RCRA and the CWA, the court justified it, by saying: This result satisfies RCRA's requirement that any accommodation "be done in manner consistent with the goals and policies" of both RCRA and CWA. RCRA § 1006(b)(1). First, under this approach, treatment is accomplished in conformance with § 3004(m)(1). *** Second, nothing in RCRA demands, as NRDC petitioners would suggest, that treatment occur prior to aggregation or dilution or that dilution not be a step in the treatment process. Third, the diluted streams deposited in the surface impoundment are not "hazardous" when placed there, and they are not held there permanently. *Id.* at 23-24. (Court's emphasis.)

The Court then proceeded to discuss the concept of permanence by juxtaposing this case with a previous LDR case that dealt with the land treatment of listed not characteristically hazardous waste. *API v. EPA*, 906 F. 2d 729 (D.C. Cir. 1990). Since the *API* decision stood for the proposition that "hazardous wastes must be treated before being land disposed" *id.*, the Chem Waste court needed to explain why it wasn't requiring LDR treatment before land placement even though the *API* court did.

The Agency's third citation is to pages 29 and 30 of the court's decision. There does not appear to be anything on these pages that address cross-media transfers, or the issue of permanent land disposal. In fact, these pages contain discussions about different legal issues such as: was the rule impermissibly vague and whether the Agency's exception to the dilution prohibition impermissibly excluded listed wastes. In regard to the latter issue, the Court held that EPA did not need to extend its exception to listed wastes noting that "the distinction is based on the primary difference between listed wastes and characteristic wastes." *Id.* at 29. In addition, the court proceeded to note that dilution could be considered a proper form of treatment in some cases and meet the requirements of RCRA §3004(m).

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. For characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant to the promulgated method.

NOTE TO EPA: This response may still need to address the larger comment of intentional vs. unintentional dilution. Direction is need to develop this response.

DCN PH4P113
COMMENTS Chemical Manufacturers As
RESPONDER SS
SUBJECT EQUV
SUBJNUM 113
COMMENT

As noted above, EPA itself has stated that even the Phase III and Phase IV rules are unnecessary and is an unwise use of Agency resources. See 60 Fed. Reg. 11,704/2 and 60 Fed. Reg. 43,656/2. Clearly, the imposition of any requirements beyond those in Phase III would be even more unwarranted.

The cursory risk assessment performed in connection with the Phase IV rulemaking does nothing to change the conclusion that further regulation of CWA impoundments is not needed. This risk assessment is so seriously flawed and misleading that it cannot support any finding that further regulation is needed to protect human health and the environment. The flaws in the assessment were only exacerbated by the fact that the assessment and its underlying information were not made adequately available to the public for review and comment.

1. As Shown in the Attached Report, The Data Used In EPA's Risk Assessment is Seriously Flawed.

CMA and The Acrylonitrile Group asked the Gradient Corporation to examine EPA's risk assessment developed for the Phase IV proposal. That report is attached and incorporated with these CMA comments. The Gradient report concludes that the Phase IV risk assessment contradicts the Agency's risk assessment principals and guidance by, among other things, using a worst case approach as opposed to conservative but realistic estimates of upper bound risk. The resulting overstatement of risk may be as high as 660 fold for the air exposure pathway and, as CMA has pointed out in previous comments, at least 240 times greater for the groundwater pathway (See Attachment CMA's 24 July, 1992 comments to CBEC/ECHO, p 12 and Appendix A of those comments).

Reasonable and appropriate corrections to the risk assessment result in the conclusion that either population or individual risks are well below the "acceptable" range, and any potential benefit afforded by regulating these surface impoundments via Option 2 or Option 3 are not necessary.

The report highlights specific concerns including:

The data sets used by the Agency in the screening risk assessment were obsolete and incomplete. This means that the risk assessment

is not based on accurate information.

Although the Agency would not identify the exact source of the data, some of the data used from the Effluent Guidelines program is more than 10 years old. Industry has made numerous changes to their wastewater treatment facilities over this time. For example, process changes have been made which changed composition and flows of waste streams, and facilities and equipment handling waste streams have been modified or replaced. Especially relevant to Phase IV, many impoundments have been closed during this period. The Agency recognizes the problems with its data base and has requested updated information. In particular, the Agency does not know how much of their data used in the risk assessment derives from tank-based systems as opposed to impoundment systems. In truth, industry cannot tell either, since the Agency has refused to release the data base because it claims that the material was submitted as confidential business information. CMA has repeatedly requested that the Agency find a way of sharing its information with us, without violating the claims of confidentiality. To date, the Agency has not done so. Clearly, no amount of anecdotal information supplied by individual industry companies or associations could satisfy the Agency's need for complete information on all impoundments currently in use which manage decharacterized wastewaters. However, if the Agency believes that the risks truly are significant, they should use the statutory authority granted to them in RCRA § 3007 to obtain current and complete facility data for an accurate assessment of risks.

The risk assessment overstated risks via the groundwater exposure pathway and the dilution and attenuation factors (DAF) were inappropriately chosen.

The DAF values chosen were inconsistent with earlier data sets used in previous rulemaking risk assessments. The generic DAF of 6 associated with the highest Agency calculated risks did not take into account any site or chemical specific conditions, or the biological degradation which occurs with organic constituents. The risks calculated for air emissions from nonhazardous surface impoundments were overstated by a factor of 660.

EPA's assessment of "baseline" risks for Phase IV are 2.5 cancer cases annually (Exhibit 2-28 of the 8/18/95 RIA for Phase IV). Gradient estimates that these risks are overstated by 660 fold, so that cancer incidence would be 0 annually (using one significant figure), with no additional Phase IV regulation.

The 100 ppm VOC trigger level used to estimate risks was derived without adequate explanation in the background documents. The

Subpart CC rulemaking, which is where this trigger comes from, is currently being litigated on several grounds, including this inappropriate threshold for control requirements.

In sum, the risk assessment is simply inadequate to suggest that risks exist which justify additional regulations. This is particularly true if the cost of Options 2 or 3 are taken into account.

2. CMA has serious concerns that the public was not provided with adequate information about the Phase IV risk assessment in a timely enough fashion to enable comments.

It is axiomatic that the basis for the Agency's policy determinations must be made available for review as part of notice and comment rulemaking. Unfortunately, many of the Agency's background documents were either not available to the public, or not available in the docket. None of the facilities' of the original data set were identified by the Agency, which claimed that it was confidential business information. Therefore, industry is unable to make specific comments on this data, or provide the Agency with current information about these facilities. Much of the information which pertained to the risk assessment (such as Subpart CC risk assessment documents, and calculation spreadsheets used in the screening risk assessment) were not available in the Phase IV docket, and significant resources and time were required to track down the information from Agency personnel. This barrier to public participation in the notice and comment process is a significant impediment to the public's right to comment on the Agency's proposal.

In addition, we believe that the Agency's current risk assessment is so flawed that the Agency should not go forward with the final rule (unless they select Option 1) until they revise the risk assessment and, once again, subject it to notice and comment.

Without an adequate risk assessment, the Agency cannot demonstrate the basis for this rule and any revision to the risk assessment based on comments/data received should be subject to notice and comment.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no

longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Since the Agency is not finalizing any of the options addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act, the commenter's dispute with the validity of the Agency's risk analysis related to facilities managing decharacterized wastes containing hazardous constituents above UTS in CWA treatment systems is moot.

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COMMENTS Chemical Manufacturers Association
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V. EPA Should Adopt A Sensible Time Sequence For Its Phase III and Phase IV Rulemakings

EPA has proposed, or will soon propose, a number of separate RCRA hazardous waste regulations that are closely interrelated: the Phase III and Phase IV LDR rules, the HWIR process waste rulemaking and a supplemental rule relating to the point of generation for hazardous wastes. CMA believes that because of the significant risks of confusion, conflict, and wasted expenses, EPA should not finalize the Phase III or IV regulations until after it has clarified the point of generation and finalized HWIR. CMA further urges EPA to issue the Phase III and IV rules with a common effective date.

In Phase III, EPA proposed that the facilities managing formerly characteristic hazardous wastes, must meet LDR treatment standards at the end-of-pipe. As part of that rulemaking, EPA asked for comments relating to the where prohibited wastes are generated. Because of industry's long-standing practice of aggregating wastewaters for centralized treatment, this a critical issue for determining the applicability of EPA's Phase III requirements and will have a major effect on compliance strategies. Because of the importance of this issue, EPA announced that it would seek additional comments on it. In Phase IV, EPA is considering whether to impose additional requirements on the same surface impoundments addressed in Phase III, with respect to potential leaks, air emissions, and sludges. Again, the point of generation is a critical issue for determining which impoundments will be subject to the rule. In the HWIR rule, EPA will establish risk-based concentration levels for many hazardous constituents, below which wastes will no longer be considered to be hazardous wastes, and thus will not be subject to further Subtitle C regulation, including the LDRs. The HWIR rule could thus delimit the number of impoundments that are subject to the land disposal restrictions under Phase III and IV.

CMA believes that if these rules are not finalized in the appropriate order, the resulting disruption of the regulated community will be severe, as well as unnecessary. As explained in detail below, the HWIR rule could make significant changes in

the LDR program, rendering worthless the substantial capital expenditures that will be necessary to comply with Phase III and IV regulations. Similar wastes of resources will result if EPA makes the Phase III rule effective earlier than the Phase IV rule, because the choices EPA makes in the final Phase IV rule will often determine the most cost-effective way to comply with the LDR requirements. Finally, EPA should not ask facilities to address compliance with either the Phase III or IV rule without finalizing the point where the land disposal restrictions attach.

It is also difficult, if not impossible, for CMA to comment on the specifics of Option 3 without proposed regulatory language.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation..

Although the Agency cannot predict exactly how the constituent-specific exit levels for certain low-risk solid wastes in the HWIR final rule will compare with the UTS levels, the Agency did consider available risk information when making decisions regarding final treatment standards in the technology-based LDR program. During the development of final treatment standards, the Agency examined whether the UTS for some metals may be far more stringent than any reasonable minimize threat level. The initial reasoning was that if the Agency found evidence that the final HWIR minimize threat level was likely to be much higher than the proposed UTS for any toxic characteristic wastestream, EPA would consider whether to raise the proposed treatment standard prior to finalizing the Phase IV rule. EPA examined the proposed HWIR exit levels for the toxic metal wastes including in the Phase IV rulemaking. When EPA compared the proposed

HWIR exit levels to the UTS for each metal constituent, the Agency found that the BDAT level was, in most cases, within an order of magnitude of the proposed HWIR exit level. There were significant differences between the proposed HWIR exit level and UTS for two metals, ____ and _____. As discussed in section ____ of the preamble to the Phase IV final rule,.....[need to complete once preamble language is written]

In light of the differences in timing between the HWIR and the Phase IV final rule, there is too much uncertainty about what the final HWIR levels will be to incorporate those levels into the UTS for any constituents. Section 3004(m) of RCRA requires that the Agency promulgate treatment standards that specify levels or methods of treatment that "substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." The proposed HWIR levels have not yet been established as "minimize threat" levels.

The Agency discussed possible changes that could be made to the "point of generation," or the point at which LDR requirements attach to a hazardous waste in the proposed LDR Phase III rulemaking (see 60 FR 11717, March 2, 1995). The Agency is still considering the options discussed in that proposal and potentially other options not discussed. The Agency will reopen the point of generation issue for further comment, and is intending to finalize an option in a future rulemaking.

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COMMENTS Chemical Manufacturers Association
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b) The Phase IV regulations should only apply to Subtitle D wastewater surface impoundments receiving decharacterized wastewater. (Item #2)

Both Subtitle C and D wastewater surface impoundments may receive decharacterized wastewaters. However, only Subtitle D surface impoundments should be impacted by the Phase IV regulations. This is consistent with the Chem Waste court ruling which was directed towards Subtitle D surface impoundments and not to Subtitle C surface impoundments. This applicability difference between Subtitle C and D wastewater surface impoundments is acknowledged in Section l.c. of the preamble:

"Today's options to address surface impoundment releases specifically apply to Subtitle D(nonhazardous) surface impoundments that receive decharacterized wastes." 60 Fed. 43,657/2.

Therefore, EPA should specifically state in the regulations that only Subtitle D wastewater surface impoundments are covered by Phase IV regulations.

c) The phrase "and other nonhazardous waste surface impoundments" should be either subject to notice and comment rulemaking or removed. (Item #3).

CMA is confused as to the meaning of "and other nonhazardous waste surface impoundments." The Chem Waste court ruling only addressed CWA treatment systems. The phrase "and other nonhazardous waste surface impoundments," or any similar phrase, is not used in the Chem Waste decision or the associated regulation. Thus, EPA should either define The phrase "and other nonhazardous waste surface impoundments" in a Federal Register notice prior to promulgation of any Phase IV regulations so that comments can be submitted from the impacted community, or delete it.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when

generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENTS Chemical Manufacturers Association
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I) CMA could improve their pollution prevention option. (Item #9)
CMA believes that pollution prevention could be an alternative to the usual LDR treatment requirements, but only if the Agency allows its use, and does not mandate it. Since pollution prevention can be a prohibition on generation of a type of waste, it can never qualify as a treatment standard for wastes that are generated. Pollution prevention, however, could be used as an alternative that allows a facility to designate a source reduction project for a particular constituent and then use that reduction as an offset against treatment of another wastestream that is less effective than BDAT.

Wastewater collection and treatment systems are complex in their nature, as the Agency is aware. The source wastewaters vary from potentially more concentrated wastes from columns and other unit operations to very dilute wastewaters from utilities such as cooling tower blowdown. The Agency has proposed to allow as excluded systems those for which source wastewaters can be identified and pretreated to an equivalent mass removal as would be achieved by treating the combined waste to UTS levels. While CMA agrees that there may be wastewater systems which can avail themselves of this option as crafted, it is too narrowly crafted to be of use to many member company facilities, respectively. However, removal efficiency achievable by steam stripping, the required MACT-based technology under the HON, is 95 and 96, respectively. Thus, the recovery efficiencies are not achievable by traditional wastewater technologies (such as steam stripping) and would require use of destruction technologies (chemical or thermal) which preclude recovery of these organics (which is the focus of the Agency's push for pollution prevention).

In order to encourage pollution prevention in all instances where a small and concentrated enough stream can be identified, CMA requests that the Agency consider a broader allowance. Where the configuration of a given wastewater system is such that an operator can show that insufficient streams are identifiable to meet the target and can demonstrate that to the regulatory authority (State or Regional), CMA believes that the

facility should also be excluded from the requirements of the Phase IV regulations related to leaks, sludges and air emissions. For facilities

to be eligible for this exclusion, CMA believes it is appropriate that EPA require that the facility actually pretreat all streams feeding the wastewater system which have recoverable materials in them.

Therefore, the Agency should adopt a requirement under the pollution prevention option that organics be removed from streams by traditional wastewater technologies (or alternative technologies which the generator can demonstrate are appropriate for the stream) where it is reasonable to do so, but should not impose a concentration limit on such streams.

RESPONSE:

Allowing a facility to designate a source reduction project for a particular constituent and then use any reduction in the quantity of that waste generated to offset required treatment of another wastestream to a level that is less effective than BDAT may not necessarily reduce the overall risk to human health and the environment, and could, in fact result in a greater risk than if both waste streams were generated and treated to BDAT standards. The Agency is not proposing or finalizing such a pollution prevention tradeoff at this time.

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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COMMENTS Chemical Manufacturers As
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D. CMA concurs that no disproportionate risk will be imposed on any community as a result of the Phase IV rule. CMA supports the goals of the Agency in ensuring that no segment of the population bears disproportionate risk, and to enhance environmental quality for all residents of the U.S. CMA does not believe that the Agency has demonstrated that any significant risks to human health and the environment are currently posed by non-hazardous impoundments handling decharacterized wastewaters.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

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3. RCRA Does Not Give EPA Jurisdiction To Impose Subtitle C Technical Requirements On Subtitle D Units.

It would run contrary to Congress' clear intentions in structuring Subtitles C and D for EPA to impose technical requirements on Subtitle D units under Subtitle C authority. While Congress intended for EPA to regulate hazardous waste management under Subtitle C, it made it clear that Subtitle D regulations were to be primarily a responsibility of the states. Although the Chem Waste decision indicated that EPA has authority to set numerical LDR treatment standards for characteristic wastes below the characteristic level, it did not state that EPA has jurisdiction to impose technical requirements on Subtitle D units that are not managing hazardous wastes. In fact, as we demonstrate above, the Court specifically authorized such subtitle D units to accept these formerly characteristic wastes stating that such accommodation was consistent with both RCRA and the CWA.

The contemplated Option 2 requirements, addressing air emissions, sludges, and leaks from CWA wastewater treatment units, would be neither prohibitions from land disposal under §§ 3004(d) through (g), nor treatment standards pursuant to § 3004(m). The technical surface impoundment requirements in Option 2 are clearly not "prohibitions," because the hazardous wastes involved are already prohibited from land disposal. 40 C.F.R. §§ 268.35, 268.37. Furthermore, the proposed Option 2 requirements cannot be treatment standards, because they are neither "levels" nor "methods" of treatment as set out in § 3004(m) of RCRA. EPA lists treatment standards that are numerical levels in 40 C.F.R. §§ 268.41 and 268.43, and lists methods in 40 C.F.R. § 268.42.

Because the Option 2 requirements would not be prohibitions or treatment standards, they are not LDR provisions, and EPA's authority to impose them must come from elsewhere in RCRA. However, there is no authority for the requirements elsewhere in RCRA, because they would regulate Subtitle D units that do not receive any hazardous wastes. The Court's decision in Chem Waste allowed EPA to impose certain continuing requirements on wastes that were no longer hazardous wastes (i.e., imposing BDAT levels below the characteristic level) but only because of the special nature of the LDR program. Apart from the LDR program, the court noted that EPA is limited to the regulation of hazardous wastes under Subtitle C. *Id.*, at 20 and 24. In *American Mining Congress v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987), the court rebuffed EPA's attempt to expand its Subtitle C jurisdiction by broadening its regulatory definition of "solid waste." The court stated:

RCRA includes two major parts: one deals with non-hazardous solid waste management and the other with hazardous waste management. Under the latter, EPA is directed to promulgate regulations establishing a comprehensive management system. [142 U.S.C. § 6921] EPA's authority, however, extends only to the regulation of "hazardous waste." 824 F.2d at 1179.

The court went on to say that "[the] very care evidenced by Congress in defining RCRA's scope certainly suggests that Congress was concerned about delineating and thus cabining EPA's jurisdictional reach." 824 F.2d at 1189. See also *American Mining Congress v. United States Environmental Protection Agency*, 907 F.2d 1179, 1185 (D.C. Cir. 1990).

The surface impoundments being considered in the Phase IV rule are Subtitle D units that are part of CWA or CWA-equivalent systems. They do not accept hazardous wastes. EPA thus has no authority to regulate them under Subtitle C of RCRA.

Finally, even if there were jurisdiction in some part of RCRA other than the LDR provisions for the Option 2 requirements, the standard for imposing such requirements is that they must be "necessary to protect human health and the environment." RCRA §§ 3002(a), 3004(a). EPA has made it quite clear that it does not consider the Phase IV rules to be necessary indeed, it does not even consider the Phase III rules to be necessary. The Agency has reinforced this policy determination many times in statements to proposed rules or before Congress. See Sections I and II of these comments. Although the D.C. Circuit rejected EPA's legal construction in the Third-third rule, the court did not disturb EPA's finding, in the "third-third" rule, that further regulation of decharacterized wastes placed in CWA systems was unnecessary as a matter of policy and environmental protection. See e.g., 55 Fed. Reg. 22,651-22,652 and 22,656-22,659 (June 1, 1990).

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P116
COMMENTS Commenter Occidental Chemical Co.
RESPONDER PMC
SUBJECT EQUV
SUBJNUM 116
COMMENT

Occidental Chemical Company (OxyChem) is a diversified manufacturer of industrial and specialty chemicals. Twelve (12) of our manufacturing locations utilize thirty-five (35) non-hazardous impoundments, primarily to manage wastewater. Seventeen of these impoundments may be affected by the proposed Phase IV (and Phase III) RCRA Land Disposal rules. Therefore, our facilities will be directly impacted by this rule and comments are being offered for the record.

OxyChem supports comments submitted for the record by the Chemical Manufacturers Association, as well as the American Industrial Health Council (AIHC).

I. Summary

OxyChem urges EPA to adopt Option 1 because of the relatively low risk to the environment from non-hazardous wastewater impoundments. Any potential risk from non-hazardous wastewater impoundments can be addressed by existing state and EPA programs. OxyChem agrees with EPA that Option 3 would be disruptive to existing wastewater treatment systems, with minimal environmental benefits.

If Option 2 is selected, it should be modified to be less proscriptive and allow state air and groundwater programs to minimize any environmental risks rather than create an overly restrictive federal rule. This modified Option 2 requires time allowances of up to four years for major replacement projects where needed to comply with Phase III and IV rules.

Our comments are categorized by the seven basic objectives which EPA set for the rulemaking.

II. Focus on Significant Risks from Permanent Disposal

A. Potential risks from non-hazardous impoundments can be more effectively addressed through the CAA, CWA and state groundwater protection programs.

OxyChem agrees with EPA statements that higher risk activities should supersede this rulemaking. Therefore, Option 1 should be selected. If gaps exist in current state programs, they should be identified and addressed through the current regulatory structure after prioritization by risk.

B. Risk estimates for non-hazardous impoundments are overstated.

OxyChem supports CMA's evaluation which states that risks to groundwater and to ambient air may be significantly overstated. Therefore, Option 1 should be sufficient.

E. A mechanism must be provided to continue to use impoundments after constituents are detected in groundwater, if warranted by site-specific factors.

If the Agency selects Option 2, OxyChem supports a self-implementing groundwater protection program. However, a mechanism similar to 258.55(I) is necessary to allow use of risk assessments where the self-implementing process is inadequate. For example, a constituent detected in the groundwater may not have originated from the impoundment being monitored.

E. EPA should clarify that these rules do not apply to ditch and trench conveyance systems which do not function as disposal or treatment units.

If there are concerns with these conveyance systems, the Agency should address them in a separate rulemaking.

III. Avoid Duplication with other EPA Requirements

A. Existing CAA and CWA programs will yield more environmental protection in a more cost effective and less confusing manner.

Cross-media transfers are possible to air, surface water or groundwater. However, the proposed Option 2 creates a fragmented and confusing system. Existing CAA, CWA and state groundwater programs incorporating EPA subtitle D guidance are the more effective authorities to address these issues. It is impossible to prevent releases of every molecule of hazardous constituents. Duplication and confusion with overlapping provisions of existing and forthcoming CAA rules and state groundwater protection rules will be created if EPA promulgates Option 2.

B. Exemptions should be granted on the basis of CAA standard applicability and not on equivalence to Subpart CC rules, if Option 2 is selected.

The wastewater generated at our facilities, which could be point-of-generation hazardous wastewater with greater than 100 ppm VOCs, is or will be subject to one or more EPA air regulations, including NESHAP/MACT (Part 61/Part 63) or NSPS (Part 60) air emission standards and their associated control requirements. If EPA air regulation development concludes emissions from wastewater are insignificant, no further action should be required under RCRA.

C. Subpart CC rules proposed under Option 2 provide a confusing overlap with other above-mentioned air rules.

Analytical Method 25 picks up a variety of compounds which may not be volatile underlying hazardous constituents (UHC s) addressed by this rule. If Option 2 is selected, air concerns should be limited to volatile UHC s as measured by any approved analytical method, rather than just Method 25.

D. OxyChem applauds the deferral under Option 2 to states where groundwater programs are "substantially similar."

However, if this option is selected, EPA should include a list of states that are similar, those that are substantially similar but need a few modifications, and those

that are not currently similar. The criteria for judging similarity should not be the MSWLF (Part 258) rules. The criteria should include program elements which can be used to protect groundwater and be flexible enough to allow for different state approaches, as long as groundwater is adequately protected.

E. A deferral should be provided for non-hazardous surface impoundments located at a permitted TSDF and/or subject to RCRA Corrective Action.

One-third of our affected facilities will avoid duplicative requirements if this exemption is offered under Option 2.

C. Groundwater protection procedures should be in the form of guidance to the states.

Groundwater sampling, analytical requirements and statistical requirements should not mirror Subtitle C or Part 258 rules.

Maximum flexibility would be provided by incorporating options into a guidance document for use by state regulators and the regulated public.

V. Recognize Valuable Treatment in Impoundments

A. OxyChem disagrees with statements that primary impoundments provide only incidental treatment.

Carefully designed primary treatment units often provide greater than 50% TSS, BOD and hazardous substance removal, as well as valuable equalization of intermittent waste streams, flow, temperature and pH.

B. Biological impoundments should be exempt from several of the Option 2 groundwater requirements.

Biological impoundments pose a minimal threat to groundwater and should be exempt from monitoring requirements. In addition, post-biological impoundments should also be exempt from air emission controls.

C. Impoundments that are used for containing wet

weather flows should be exempted under Option 2.

This is particularly true in southern states where tank-based wastewater treatment systems often have impoundments to contain diluted process and stormwater generated periodically during high rainfall events. These impoundments often are used to protect tank-based systems from hydraulic surges and prevent weather related effluent excursions.

D. A waiver of remediation should be allowed if warranted by site-specific factors.

If Option 2 is selected, a provision allowing for a waiver of remediation, similar to that provided in the MSWLF rules, Part 258.57, should be incorporated. Provisions should be made to allow continued use of an impoundment if no threat exists to the environment and if the discharge to the impoundment is modified. This would allow consideration of site-specific factors.

VI. Protect Human Health and Environment

A. It may be unfeasible or unnecessary to remediate all leaks.

OxyChem does not agree with EPA logic under Option 2 that, if an underlying hazardous constituent is leaked, it is illegally disposed of waste that must be retrieved and properly managed. In some situations, there may be no significant threat to the environment, especially for compounds where no drinking water MCL exists or where an active remediation program already exists.

C. Using drinking water standards to trigger monitoring is reasonable.

Setting the trigger level for monitoring well installation under Option 2 based multipliers of drinking water MCL s or state groundwater protection standards seems reasonable. Again, however, if technology based UHC s are used, it should not be assumed they are groundwater protection standards.

VI. Minimize Implementation Burden

A. If Option 2 is selected, the Phase III and IV rules should be merged into one rule, with one schedule of compliance.

EPA stated that public comments on the Phase III rulemaking were not reviewed by the time this rule was proposed. Final decisions on upgrading or replacement must consider impact of both Phase III and IV rules.

D. OxyChem favors the self-implementing nature of Option 2 regarding groundwater protection, but flexibility must be added.

This closely parallels elements of the CMA Responsible Care Program. However, wholesale adoption of MSWLF Part 258 rules is not

warranted. They are too proscriptive, overly detailed, and do not address inadequacies in the Subtitle C groundwater program. Because of the detailed nature of Part 258, the majority of self-implemented programs will require agency involvement. Guidance for groundwater protection programs should be developed for states. If a state program does not meet all elements of the guidance, a site should be able to demonstrate how it can accomplish the overall objective if one or more elements from EPA's program are missing from the state program. Sites with existing state- or EPA- approved groundwater monitoring programs should not have to repeat an adequacy demonstration.

E. Other mechanisms for detecting releases to groundwater should be allowed under Option 2, especially for existing impoundments. For example, vadose zone monitoring or leachate collection system monitoring should be allowed in place of groundwater monitoring if no leaks are detected.

G. The applicability scope of the rule should be clarified. This includes stating that both Phase III and Phase IV rules do not apply to non-hazardous sludges generated from tank-based wastewater treatment systems to prevent future confusion.

VIII. Create Incentives for Alternative Controls

A. Controlling emissions at impoundments is impractical.

If Option 2 is selected with Subpart CC air controls, point-of-generation recycle or pretreatment options must be done because covering impoundments and adding air controls to the covers will rarely be feasible.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P116
COMMENTS Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

B. A mechanism should be provided to allow use of site-specific factors in determining site groundwater protection levels.

Use of technology-based universal treatment standards (UTS) as default groundwater protection standards may not always be appropriate. Additionally, we agree it may not be reasonable to clean up to below background levels. In some cases, it may not be feasible to clean up to background levels. Clean up to background or UTS levels should not always be required if hazardous wastestream constituents are reduced in the discharge to the impoundment and no significant threat to groundwater exists.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P116
COMMENTS Commenter Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

D. The main focus of groundwater remediation should be to prevent offsite releases.
OxyChem agrees with EPA in that, under Option 2, in some industrial settings, the point of compliance may be the property line.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P116
COMMENTS Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

B. OxyChem supports broadening of the pollution prevention compliance alternative.

However, it should be constructed as broadly as possible. The option of pursuing equivalent air, water or groundwater reductions of constituents from sources other than the point of generation can be highly effective and environmentally protective.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Since the Agency is not finalizing any of the options addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act, the commenter's suggestions regarding the broadening of the pollution prevention compliance alternative are no longer relevant.

DCN PH4P116
COMMENTS Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

D. The proposed wastewater standards for volatiles should be reevaluated to account for efficiencies of treatment technology applicable to wastewater.

As indicated in our comments on Phase III, differences in available treatment technologies must be considered for organic and inorganic chemical production facilities. For example, biological treatment was used as the basis for the chloroform standard of 0.046 mg/l. As indicated in the OCPSF Effluent Guidelines (40 CFR 414), direct dischargers (e.g., chlor/alkali facilities) that do not (and could not because of low organic content) use end-of-pipe biological treatment are subject to different standards, based on different treatment technology. Inorganic chemical facilities would consider the use of stripping technology for their wastewater, particularly for waste streams with a series of organics. The proposed chloroform standard of 0.046 mg/l may not be consistently achievable. In fact, 40 CFR 414.101 specifies a chloroform limit of 0.325 mg/l to account for these performance variations.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these

surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

DCN PH4P116
COMMENTS Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

B. Final regulatory language needs to be issued for public comment.

This is not a proposed rule but a discussion of possible approaches. Therefore, review of the final rules should be allowed, unless the final rule is issued as guidance only.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Since the Agency is not finalizing any of the options addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act, the commenter's concerns regarding publication of regulatory language for notice and comment is moot.

DCN PH4P116
COMMENTS Occidental Chemical Co.
RESPONDER SS
SUBJECT EQUV
SUBJNUM 116
COMMENT

B. OxyChem supports broadening of the pollution prevention compliance alternative.

However, it should be constructed as broadly as possible. The option of pursuing equivalent air, water or groundwater reductions of constituents from sources other than the point of generation can be highly effective and environmentally protective.

RESPONSE:

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996, EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

Since the Agency is not finalizing any of the options addressing equivalency of treatment in wastewater treatment systems regulated under the Clean Water Act, the commenter's suggestions regarding the broadening of the pollution prevention compliance alternative are no longer relevant.

DCN PH4PL02
COMMENTS Distilled Spirits Council
RESPONDER SS
SUBJECT EQUV
SUBJNUM L02
COMMENT

Occasionally, distilled spirits products may need to be disposed of due to organoleptic concerns, mislabeling, discontinuation of a product line, or excessive age. In each instance, the discarded product still is potable. Further, ethanol is totally miscible in water and disperses rapidly; therefore, dilution prior to introduction into a surface impoundment fully satisfies the deactivation standard set forth in Table 1 of 40 C.F.R. § 268.42. Ethanol, diluted, rapidly biodegrades to carbon dioxide and water once placed in an impoundment. Thus, in light of the fact that distilled spirits contain no underlying hazardous constituents, deactivation of the hazardous characteristic through dilution is satisfactory as an exclusive method of treatment within the meaning and purpose of RCRA § 3004(m).

DISCUS agrees with EPA that the court in Chemical Waste Management v. EPA, 976 F.2d 2, cert. denied 113 S.Ct.1961 (1992), did not intend to require that LDR standards be met by treatment prior to impoundment for such waste. 60 Fed. Reg. at 43656. DISCUS therefore supports the first proposed option, which would rely upon the Phase III rule and other Agency programs to address potential cross-media releases from surface impoundments.

Pursuant to this option, ignitable wastes that have been deactivated through dilution to eliminate the hazardous characteristic may be placed in surface impoundments without further treatment unless they contain underlying hazardous constituents in sufficient concentrations to pose a threat to human health or the environment. While DISCUS favors this option, we also request a clearer statement in both the Phase III and Phase IV rules to the effect that if a hazardous waste has been deactivated so that no hazardous characteristic remains and the waste contains no underlying hazardous constituents (or contains constituents in concentrations below the threshold in the Universal Treatment Standard), then dilution is acceptable as an exclusive method of treatment.

RESPONSE

In the August 22, 1995 Phase IV proposal, EPA discussed three options for ensuring that underlying hazardous constituents in decharacterized wastes were not released to the environment via leaks, sludges, and air emissions from surface impoundments in systems regulated by the Clean Water Act or Safe Drinking Water Act (60 FR 43655). Decharacterized wastes are wastes which initially exhibited a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity when generated but are no longer characteristic). On March 16, 1996, the President signed the Land Disposal Program Flexibility Act of 1996, which provides that the wastes in question are no longer prohibited from land disposal once rendered nonhazardous. As a result, on April 8, 1996,

EPA withdrew its treatment standards for these wastes (61 FR 15660). Today's Phase IV final rule will not promulgate provisions for managing leaks, sludges, and air emissions from surface impoundments (EPA proposed options on August 22, 1995 (60 FR 43655-43677)). Furthermore, the treatment standards for TC metal wastes in today's rule do not apply to TC metal wastes if the characteristic is removed and the wastes are subsequently treated in a unit that is regulated by the Clean Water Act or, for underground injection wells, the Safe Drinking Water Act.

However, the Land Disposal Flexibility Act does mandate EPA to undertake a 5-year study to determine any potential risks posed by cross-media transfer of hazardous constituents from these surface impoundments. The findings of this study, begun by the Agency in April, 1996, may result in proposed regulations for these units, if risks are in fact found that would warrant such regulation.

There is one caveat. Characteristic hazardous wastes that are managed in CWA or CWA-equivalent systems, and for which EPA has promulgated a method of treatment as the treatment standard (e.g., high TOC ignitable wastes for which the treatment standard is recovery of organics) remain prohibited unless treated pursuant by the promulgated method.