

US EPA ARCHIVE DOCUMENT

DRAFT SUMMARY OF MEETING WITH REPRESENTATIVES OF CHEMICAL  
WASTE MANAGEMENT (CWM) TO DISCUSS COMMENTS AND DATA RELATED  
TO PHASE IV

May 23, 1996, 10:00 - 12:00  
2800 Crystal Station  
Arlington, VA  
2nd Floor, Costale Room

ATTENDEES: See Attachment 1

The following summarizes the issues that were discussed at the May 23, 1996 meeting between EPA and CWM representatives. This narrative does not provide a verbatim account of the meeting, and for the purposes of clarity and continuity, items are sometimes not presented in the order in which they were discussed.

The purpose of this meeting was for EPA and CWM representatives to discuss comments and additional data regarding the Proposed Phase IV rule (proposed treatment standards for characteristic metal wastes). The primary concerns expressed by CWM were treatment of wastes that (1) have problems meeting current LDRs; (2) have more than one metal contaminant; (3) contain arsenic, lead, or selenium; and (4) have low levels of contamination. CWM also expressed concerns about the perceived inconsistencies between RCRA and TSCA and the HWIR and Phase IV rules.

After copies of the meeting agenda (attachment 2) were distributed, CWM began with a few opening comments: The comments submitted by CWM were based on a survey of their technical managers. Additional data were provided by CWM that backs up their comments with real waste stream data. In general, CWM lacks data for UHCs, because there have been no previous regulatory drivers requiring generators to test for these constituents in their wastes.

CWM asserted that from a policy standpoint, the Phase IV proposal does not make sense. For example, concerns were raised regarding scenarios such as the following: if a waste is characterized as D008, it will need to be treated for UHCs, but if a similar waste had the same UHCs at higher concentrations, but did not contain lead, it may not be hazardous, and therefore, could be sent to a Subtitle D facility without treatment. Because it fails TCLP for lead, the first waste pulls the organics into Subtitle C. CWM also mentioned the current EPA policy which states that a hazardous waste with metals cannot be burned unless it contains organic UHCs above the UTS levels. If the UHC levels are barely exceeded, incineration may not be appropriate, but it is allowed.

CWM stated that the current system is working fine, and wondered what value was added by the proposal. The UHC requirement complicates the waste characterization process when generators use their knowledge of the characteristics of the waste stream; at low UHC levels,

the generators would just be guessing. Currently, no one can certify that the UHCs are not in the waste.

Sometimes decharacterized waste is sent to a Subtitle C landfill. (The changes to 40 CFR 258 have resulted in better construction of Subtitle D landfills, and the design standards are much closer to Subtitle C than before.)

#### **Agenda items 1 and 2: Applying UTS and UHCs to Characteristic Metal Wastes**

CWM stated that their technical managers provided their data quickly, and more may be available. They also stated that when, for example, D008 is treated, treatment is halted when the concentration of the lead in the waste is below the characteristic level of 5.0. Sometimes the TCLP result may be lower than 5.0, but CWM has not tried to reach 0.37, and although they have achieved this level on some occasions, they do not know if it can be reached on a regular basis. Typically, the waste will carry multiple waste codes, and interaction of the metals will interfere with the test results (e.g., low lead leachate, but high chromium leachate levels). CWM indicated that they need to examine the waste streams individually, and determine what new (and possibly cheaper) reagents they need to add to meet the UTS. CWM referred to their original comments where they stated an estimated cost of about \$1,000 per waste profile to do this. They mentioned that one of their facilities recently examined different profiles and determined that the cost of changing their stabilization recipes increases the treatment cost by about 32 percent. CWM estimates that about 70 to 80% of the waste that they currently treat can meet UTS without additional cost.

The current CWM treatment capacity is 500,000 TPY, but "20 to 30 percent" of this will require a new treatment recipe to meet the UTS for D004 through D011 wastes. The recipe for a batch stabilization is specific for that batch and is determined on a case-by-case basis. CWM tries different recipes in the lab, and then scales up the process. Treatment is verified at each step in case the original sample was not representative of the waste.

CWM disagrees with EPA's positions that (1) treating to meet the characteristic level does not exempt a waste from RCRA, and (2) even though there is good treatment now, it should be modified if there is better treatment. When treating for metals to UTS, there can be other changes to the wastes characteristics (e.g., solubility) that may effect its treatment. Problems can occur when treating at low ppm levels. For example, when the standard is 0.5 ppm and a waste has been treated to 0.75 ppm, re-treatment with bulk reagents can lead to incidental dilution. (Multiple facilities use a back hoe and a pit to do stabilization.)

CWM believes that pre-treatment is too costly, and competition is already difficult. EPA believes that pre-treatment to homogenize wastes should not be cost prohibitive, because, based on the reaction kinetics, treatment would be ineffective without it. Sometimes pre-treatment (e.g., crushing) is done to facilitate the process. Sometimes problems such as different particle sizes, or a "sticky" clay matrix can require pre-treatment.

Problem wastes include those that contain arsenic, lead, and selenium. Treatment of wastes containing selenium is a consistent problem, especially as an UHC. Sometimes lead is a problem, but CWM can normally treat to meet UTS most of the time. Treating for more than one metal at a time is a problem. Results depend on the interaction of the metals in the waste.

In addition to the "20 to 30 percent" of wastes that are difficult to treat, CWM indicated that 5 to 10 percent are "untreatable." CWM was unsure of the characteristics of these wastes (data and information was not presented at the meeting). EPA is interested in a breakdown (i.e., soil, debris, process) of these wastes. CWM uses the alternative standards for debris, and generally segregates "problem" wastes such as those that contain arsenic and selenium.

When asked about the co-mingling of wastewaters that generate a sludge, and whether the stricter standards will lead to source segregation, CWM stated that they did not believe so. Rather than installing a second tank, CWM believes an electroplater will send the waste to a treater to get rid of the problem before 90 days. They believe that generators will keep looking for a TSDF to solve their problem, such as sending wastes to Stabilex and Laidlaw in Canada, and that generators will treat the waste themselves only in an exception. In general, generators call a TSDF for large one-time wastes, and focus on minimization of continuous process waste.

The CWM waste treatment database (comprised of 6 years of data from all of their sites) may not contain information on trying to treat selenium to lower levels, because CWM only tries to meet the current BDAT levels. CWM stated that the TCLP for selenium in a waste may not change, even when the treatment process recipe for that same waste is modified. Treatment of wastes containing beryllium was not included as part of CWM's data submission, but they could look into it if necessary.

### **Agenda item 3: May 10, 1996 NODA**

- **Organic UHCs**

CWM does not have much data on organic UHCs except for PCBs treated in conjunction with metals. TOC data is also not available because the generators do not provide it, and CWM does not ask for it. For example, additional TOC information may be requested if organics are identified on a waste profile as present at significant concentrations (e.g., one percent). In general, there is no analytical data to back this value up. CWM does not request halogen analysis for wastes to be stabilized. When their database was queried, only a few examples were found. Previous CWM comments to EPA regarding organic UHCs were guesses, based on their PCB data. CWM conducted stabilization tests in 1985 on low level (1%, 2%) organics, and may have some data (CWM did not have the data at the meeting, and would need to retrieve it from their database).

CWM asserted that treating foundry sands is not a problem if the levels of organics are known. Treating foundry sands with TC level metals can be a problem. CWM asserted that when treating a waste, they need to consider how the level of organics will effect the treatment. They

also examine the level of interference of the constituents, and the effect that these constituents (especially organics) have on liners.

Regarding treatment with organically modified clay, CWM has not reviewed this process yet, but has tried organic oxidation and stabilization (same principle), and submitted their data to EPA. The data show that the treatment does not work well. When the waste is stirred, organics are volatilized. When cement is added, heat is generated, and more organics are volatilized. Even low levels of organics will be volatilized, and these organics are not easily captured.

EPA is examining the following scenario: if a waste meets the UHC standard, then it automatically meets the Subtitle CC standard (i.e., Air Emission Standards for TSDFs). EPA is looking for data that correlates UHC concentrations to the 40 CFR Part 264 Subtitle CC (i.e., Air Emission Standards for TSDFs) action levels, and if the above scenario works in both directions. CWM commented that it would primarily depend on the efficient operation of the stabilization technology. Subtitle CC air emission controls could cover the VOCs that were driven off during treatment, but adequate capture may be a problem. Particulates are captured, but VOCs are a problem because of the huge air volume.

When asked which organic UHCs are most likely to be found in wastewater treatment sludges, CWM stated that they do not have data for plating sludges with low levels of organics because their waste profiles do not always have this information. This may be asked of their customers if the new rule is promulgated. Treated F006 and F009 wastes have not been tested for phthalates, etc., and CWM does not know if they are present. EPA suggested that a generator would know what was in a solvent used in cleaning operations, or the plant engineers should have a feel for this data. CWM suggested that the electroplaters trade association might know this information.

To determine the volume of UHCs and the levels of UHCs in wastewater treatment plant sludges, CWM could only give an educated guess, from the information in their database. This would tell them where to look in the future. Surveying their managers and doing a database query would take a couple of weeks.

CWM data for D012 through D043 wastes has some metals information, but not much on UHCs. EPA wants to get an idea of what is in the waste (e.g, phthalates, solvents, etc.). To accomplish this, the CWM database can be queried by company name, process name, waste code, etc., and after input from their technical managers, CWM could extrapolate a response.

The "order of magnitude" test for organics was recommended by CWM technical managers as an approach to alleviate the problem of wastes with low levels of organics (but CWM has no data to support this).

- PCBs

Last year CWM stabilized 46,000 tons of D004 through D011 wastes with TSCA levels of PCBs. TSCA allows land disposal of "solid" PCBs in a TSCA cell without incineration. There is substantial data to support that "solid" PCBs stay in place once stabilized. RCRA requirement to incinerate may be counterproductive. CWM indicated that the levels of PCBs in the waste they treat are so high that even the order of magnitude solution could not solve this problem. CWM expressed concerns over inconsistencies; TSCA allows land disposal, and treating the UHCs of metal wastes will require incineration. TSCA landfill standards are only slightly different than RCRA standards. CWM suggested that the TSCA standards are sufficient for the PCBs and the metals would be treated.

- Petroleum contaminated media

CWM requested clarification of the 261.4 exclusion for UST corrective action wastes:

Q: If a waste is characterized as D008, the proposal requires treatment for UHCs (e.g., benzene) that seem to be excluded under 40 CFR 261.4. What is the purpose of the exclusion?

A: The exclusion is for hazardous waste identification purposes only. If a waste is hazardous for any other reason, the exclusion is void, and the waste is subject to all RCRA provisions, including LDRs.

- Costs associated with change

Paul Borst/EPA asked if UHC standards would lead to exports or waste minimization, rather than incineration. The answer will depend on economics (currently, incineration can cost from \$1,300 to \$1,400 per ton). Paul will follow-up with CWM to discuss the nature and types of wastes where the proposal has more than a moderate cost impact.

- Environmental reasons for change in light of HWIR

CWM expressed concerns about how the HWIR rule may be in conflict with the Phase IV rule; that the Agency seemed to be going in opposite directions in terms of stringency.

EPA is constrained because of the consent decree. Also, HWIR is based on total concentrations, and Phase IV is based on TCLP concentrations. CWM was asked if they knew of any obvious wastes that would be covered under the Phase IV rule, and be exempted by HWIR. CWM data is TCLP-based. They do not have much information on the relation of totals to TCLP results. Generally CWM does not run a total analysis on untreated waste.

CWM discussed the issue of contingent management and risk. LDRs are not required to be met if placed in a low risk area. A risk model on a properly designed Subtitle C landfill in a dry climate might indicate that not much treatment is required for waste disposal. This changes if

the area is subject to high precipitation. Similarly, CWM is intrigued because wastes can be delisted at higher than BDAT levels, because delisting is based on risk.

- Lead-bearing Smelter Wastes (Slag from lead-acid batteries)

CWM requested clarification of an issue in the May 10, 1996 NODA.

Q: If a battery is smelted to meet the LDRs, does the slag require further treatment?

A: If the slag is characteristic, all other non-LDR requirements must be met. The slag must be sent to a Subtitle C unit or treated to non-characteristic levels, and then sent to a Subtitle D unit. The waste has met the LDR treatment standard, and the residue does not need to be treated further for Subtitle C disposal.

At the end of the meeting the following Action Items for CWM were discussed:

- Provide break-out (media, process, etc.) of the 20 to 30% of wastes that need to be re-tested.
- Provide break-out (media, process, quantities, etc.) of the 5 to 10% of wastes that need are "untreatable."
- Provide list of industry wastes that CWM expects will have UHCs and organics. Include corresponding SIC codes if possible.
- Provide data on testing of organics and interference problems.
- Provide information on foundry sands. Include data for organics and metals, and provide treatment costs and volumes.
- Provide data on treatment of Selenium wastes (treatment recipe is CBI)

CWM expects to have all information to EPA by June 17. CWM will call Anita Cummings with a tentative schedule for individual items.

**Attachment 1: List of Attendees**

Anita Cummings, EPA/OSW/WTB  
Mike Petruska, EPA/OSW/HWMMD  
Kevin Igli, CWM  
Mitch Hahn, CWM  
Paul Borst, EPA/OSW  
Mary Cunningham, EPA/OSW/WTB  
Jim Buchert, Versar  
C. Pan Lee, EPA/OSW/HWMMD  
José E. Labiosa, EPA/OSW  
Steve Silverman, OGC/EPA  
Sue Slotnick, EPA/OSW  
Rhonda Craig, EPA/OSW  
Jim Thompson, EPA/OECA (via Phone)



Attachment 2: Meeting Agenda

EPA/Chemical Waste Management

May 23, 1996

Agenda

1. Applying UTS to Characteristic Metal Wastes
2. Applying UHCs to Characteristic Metal Wastes
3. May 10, 1996 NODA
  - Metal UHCs
  - Organic UHCs
  - Inorganic Combustion Policy
  - PCBs
  - Petroleum contaminated media
  - Costs associated with change
  - Environmental reasons for change in Light of HWIR
  - Lead-bearing Smelter Wastes (Slag from lead-acid batteries)