



A Division of The Society of The Plastics Industry, Inc.

April 9, 1990

TO: VI Health, Safety & Environment Committee

RE: TCLP/Issue For Discussion May 10th

The enclosed Keller and Heckman memo and letter on the impact of the EPA's Toxicity Characteristic Final Rule is for your r view. Joe Ledvina has volunteered to lead a discussion on the rule and its impact at the May 10th meeting of the Health, Safety & Environment Committee. About an hour or so of the agenda will be devoted to this issue. Please come prepared to discuss your company's activities and concerns. If you have any additional agenda items, please let me know by April 15th.

Meredith N. Scheck
Assistant Director

MNS/pmb
cc: R. Gottesman

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LAW OFFICES

KELLER AND HECKMAN

1150 17TH STREET, N.W.

SUITE 1000

WASHINGTON, D.C. 20036

(202) 956-5600

April 3, 1990

JOSEPH E. KELLER
JEROME H. HECKMAN
WILLIAM H. BORGHESEANI, JR.
MALCOLM D. MACARTHUR
WAYNE V. BLACK
TERRENCE D. JONES
MARTIN W. BERCOVICI
JOHN S. ELDRED
CAROLE C. HARRIS
MARY MARTHA MENAHERA
MICHAEL F. MORRONE
MARK FOX EVENS
JOHN B. RICHARDS
JOHN B. DUBECK
PETER L. DE LA CRUZ
CHRISTINE M. GILL
MELVIN S. DROZEN
SHIRLEY S. FUJIMOTO
LAWRENCE P. HALPRIN
RALPH A. SIMMONS
PETER A. SUTTER
C. DOUGLAS JARRETT

SHEILA A. MILLAR
JAMES J. MURD
GEORGE S. HIRSH
FREDERICK J. DAY, JR.
MARCIA K. COWAN
S. CRAIG TAUFFEST
MARK A. SIEVERS
MICHAEL A. BENNETT
G. FRANKLIN KOONTZ
CATHERINE N. ROEMER
RICHARD A. JAFFE
JEFFREY S. KERR
KRIS ANNE MONTEITH
ELLIOT BELILLOS
SHANNON L. DENMAN
SUSAN E. FOX
MARK L. ITZKOFF
EDWIN C. MOURE
MARC BEREJKA
JUSTIN P. MCCARTHY
KENNETH A. OLSEN
JEFFREY S. LANG

*NOT ADMITTED IN D.C.

SCIENTIFIC STAFF

DANIEL S. DIXLER, Ph.D.
CHARLES V. BREDER, Ph.D.
ROBERT A. MATTHEWS, Ph.D.
JOHN P. HODDERMAN, Ph.D.
HOLLY KUTHIRE FOLEY
JUSTIN C. POWELL, Ph.D.

TELECOMMUNICATIONS

ENGINEER

CHARLES F. TURNER

TELEX

48 95591

TELECOPIER

(202) 296-7692

CABLE ADDRESS "KELMAN"

WRITER'S DIRECT DIAL NUMBER

(202) 956-5641

Mr. Frank E. Borelli
Georgia Gulf Corporation
42C Read's Way
New Castle Corporate Commons
New Castle, Delaware 19720

Re: EPA Toxicity Characteristic Rule

Dear Frank:

This letter follows a discussion at the March 15, 1990 Executive Board Meeting of the Vinyl Institute concerning the Environmental Protection Agency's (EPA) final rule amending the toxicity characteristic for identifying hazardous wastes under the Resource Conservation and Recovery Act (RCRA). 55 Fed. Reg. 11798 (March 29, 1990). The attached memorandum by Jeff Lang reviews some of the principle issues of concern to the Vinyl Institute. A brief recap follows:

(1) Regulatory Threshold

The regulatory threshold for vinyl chloride is 0.2 mg/l. This is an improvement over the regulatory threshold in the 1986 proposal, which was 0.05 mg/l.

(2) Compliance

- a. For large quantity generators (greater than 1,000 kg/month total hazardous waste), compliance is required within 6 months.
- b. For small quantity generators (100-1,000 kg/month), compliance is required within 12 months.

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- c. For surface impoundments that are newly regulated as hazardous due to this rule, companies must comply with the minimum technology (double liners and groundwater monitoring) requirements by March 29, 1994. However, the retrofitting requirement may be expedited if EPA adds the newly listed TC wastes to the land disposal ban regulations, a decision it must make by September 29, 1990.

(3) Surface Impoundments

- a. Surface impoundments are covered under the rule.
- b. The same mismanagement scenario applies to both landfills and surface impoundments, that is, a single dilution attenuation factor is used by EPA.
- c. The regulatory threshold for surface impoundments is determined by measuring the water stream at the point of entry into the impoundment. EPA considers this the "point of generation."
- d. Multiple impoundments are regulated individually, meaning that the RCRA status of each impoundment must be established independently by analyzing the inlet water quality.

We understand that you will be polling the Health, Safety and Environment Committee to determine the Committee's reaction to the final rule and that a meeting on this subject may be held shortly.

I look forward to speaking with you further.

Cordially yours,



Peter L. de la Cruz

Enclosure

cc: Robert D. Luss, Esq.
Larry Thomas
Robert W. Sherman
Hugh Patrick Toner
Roy T. Gottesman

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M E M O R A N D U M

TO: Peter L. de la Cruz
FROM: Jeffrey S. Lang
DATE: April 3, 1990
RE: EPA Toxicity Characteristic Final Rule

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I. INTRODUCTION

The Environmental Protection Agency (EPA), issued a final rule amending the toxicity characteristic (TC) for identifying hazardous wastes under the Resource Conservation and Recovery Act (RCRA). 55 Fed. Reg. 11798 (March 29, 1990). The rule: (1) replaces the Extraction Procedure (EP) test with the Toxicity Characteristic Leaching Procedure (TCLP); (2) adds 25 organic chemicals, including vinyl chloride, to the list of toxic constituents of concern; and (3) establishes regulatory levels for these organic chemicals based on health-based concentration thresholds and a dilution/attenuation factor that was developed using a subsurface fate and transport model.

This memorandum addresses details of the draft rule in three areas: the regulatory threshold for vinyl chloride, the regulatory status of surface impoundments, and compliance deadlines.

II. DISCUSSION

A. Regulation of Vinyl Chloride

The final rule establishes a regulatory threshold of 0.20 mg/l for vinyl chloride. This is a substantial improvement over the proposed rule's regulatory threshold of 0.05 mg/L.

EPA addressed comments objecting to the inclusion of vinyl chloride to the list of toxic constituents of concern. EPA noted that the commenters are correct in stating that vinyl chloride and polyvinyl chloride are already regulated under other environmental health and safety statutes. However, none of these other regulatory authorities address the specific problem of ensuring against releases of vinyl chloride caused by the improper management of solid wastes containing this constituent. Most importantly, none of the authorities directly protect ground water supplies from vinyl chloride contamination.

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EPA noted that an analysis completed as part of the Regulatory Impact Analysis of this regulation indicates that large quantities of wastes currently not regulated as hazardous contain concentrations of vinyl chloride above the regulatory levels. Therefore, the Agency believes that RCRA regulation under the toxicity characteristic is an important expansion of the overall regulatory coverage for vinyl chloride. 55 Fed. Reg. at 11811.

B. Regulation of Surface Impoundments

In response to the 1986 proposed TC rule, EPA received many comments questioning the validity of applying the TC to wastes, including wastewaters, likely to be managed in surface impoundments. In response to commenters' concerns, in May 1987, EPA published a Supplemental Notice of Proposed Rulemaking in the Federal Register, which requested comments and data on several issues related to the regulation of wastes managed in surface impoundments under the TC rule. Fed. Reg. (May 18, 1987). The Agency also requested comment (assuming such an approach) on: (1) the criteria to be used to determine whether the surface impoundment scenario should apply to a particular waste, (2) the point at which concentration measurements should be made (e.g., at the point of generation or within the impoundment), and (3) how multiple surface impoundments should be handled under the TC rule.

1. Extent to Which the Mismanagement Scenario for Wastes Managed in Surface Impoundments is Appropriate

Hazardous waste characteristics are designed to identify solid wastes that pose a threat to human health and the environment when improperly managed (RCRA Section 1004(5)). Therefore, in developing the TC, EPA had to determine how wastes might plausibly be mismanaged. According to EPA, a mismanagement scenario that both was reasonably realistic and presented the greatest environmental risks could then be chosen as the reasonable worst case scenario and used as the basis for the revised characteristic. Specifically, the characteristic would be designed to identify any wastes from which toxic constituents would be likely to pose a threat to human health and the environment when managed in accordance with the selected scenario.

In the 1987 Supplemental Notice of Proposed Rulemaking, the Agency stated that it was considering developing a separate mismanagement scenario applicable to wastes that are managed in

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unlined surface impoundments. Developing a surface impoundment scenario, in addition to the landfill scenario, would mean that the TC would have two different sets of regulatory levels. Waste generators would first have to determine which scenario is appropriate and then would be responsible for evaluating whether their waste exceeded the applicable regulatory levels.

In the notice, the Agency requested comments on the appropriate criteria to be used in determining whether the characteristic should apply to a particular waste. The Notice suggested three possible approaches:

1. The "management-based" approach, which would apply only to those wastes actually managed in impoundments;
2. The "physical property-based" approach, which would apply to those wastes having a certain physical property indicating that they are likely to be managed in surface impoundments (e.g., percent solids less than 5 percent); and
3. The "definition-based" approach, which would apply to those discharged waste-waters that are subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act.

In comments submitted by the Vinyl Institute to EPA on July 2, 1987, we noted that the selection among these three approaches is not particularly significant because the waste-water is managed in surface impoundments, has less than 5% solids, and is subject to regulation under sections 402 or 307(b) of the Clean Water Act when discharged.

EPA received comments, many of which stated a preference for a separate mismanagement scenario for aqueous wastes managed in surface impoundments because the landfill management scenario resulted in inappropriately low regulatory levels.

The Agency believes that evaluation of the physical phenomena that affect dilution/attenuation factors (DAFs) indicates that the DAFs generated for landfills are similar, if not greater than, DAFs for surface impoundments (i.e., the regulatory levels for surface impoundments would be equal to or more stringent than those for landfills). The Agency, there-

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fore, does not plan to develop a separate surface impoundment mismanagement scenario at this time.

2. The Point At Which Concentration Measurements
Should be Made

In the May 1987 supplemental notice, EPA requested comments on whether evaluations of wastes managed in surface impoundments should be based on measurements of the concentration in the impoundment or at the inlet to the impoundment. In response, some commenters supported sampling at the inlet to the impoundment and stated that sampling the waste within the impoundment is not only contrary to Congressional intent, but conflicts with EPA's own regulations that require the determination of hazard to be made at the point of generation.

However, other commenters, including the Vinyl Institute, argued that wastes should be sampled within the impoundment or that the impoundment effluent should be sampled. Many of these commenters argued that measuring the concentrations in the impoundment more accurately represents the concentrations of hazardous constituents that pose a threat to ground water. Some commenters argued that evaluation of hazard should be based on impoundment effluent because concentrations of the wastewaters within the impoundment are approximately the same as the concentrations in the impoundment effluent.

EPA believes that determination of the regulatory status of a waste at the point of generation continues to be appropriate. The current rules require that the determination of whether a waste is hazardous be made at the point of generation (i.e., when the waste becomes a solid waste). EPA concedes that leachate quality may be more appropriately assessed by measuring concentrations at multiple sites within the impoundment. EPA did not allow such sampling, since the Agency has not yet evaluated completely nor taken comment on all the questions raised by this sampling point. 55 Fed. Reg. 11830.

3. Multiple Surface Impoundments

In the May 18, 1987 notice, EPA requested comment on how multiple surface impoundments or "treatment trains" should be handled under the TC rule. Some commenters favored regulating all surface impoundments in a treatment train as a single unit -- if the first impoundment treats a hazardous waste, all impoundments would be required to comply with the RCRA regulations for hazardous waste treatment facilities.

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Other commenters, however, suggested that each impoundment should be regulated individually. Still other commenters, including the Vinyl Institute, stated that owners and operators should be required to determine whether the most upstream surface impoundment is treating wastes that exhibit the TC, but they should only be required to evaluate downstream impoundments if an upstream impoundment exhibits the TC.

The Agency has decided not to develop a separate regulatory scheme for surface impoundments. Thus, the Agency will continue to regulate all surface impoundments as individual units and will not pursue any of the other options discussed by commenters.

C. Compliance

Several commenters, including the Vinyl Institute, noted that the 6-month effective date of the TC rule does not provide sufficient time to come into compliance with the full array of hazardous waste regulations. Nevertheless, EPA has not changed the effective date for the final TC rule. The Agency supports this decision by referencing RCRA section 2010(b) which requires that hazardous waste regulations become effective six months after the date of promulgation unless EPA has good cause to establish an earlier date (emphasis add d).

All generators of over 1,000 kg/month of hazardous waste are required to comply with all applicable RCRA regulations for their TC wastes on the effective date of this rule. (The generator quantity refers to the overall total of a generator's hazardous waste, not just newly hazardous TC waste.) This compliance category includes two groups of generators: current hazardous waste generators, including small quantity hazardous waste generators who will be generating additional hazardous wastes and generators of large quantities of solid wastes who will be regulated as hazardous waste generators for the first time. EPA believes that both of these groups of generators should predominantly be large businesses and either be familiar with the waste management regulations or be in a position to come into compliance with the requirements within the six month period. EPA's position is that these persons should have been aware of the Agency's statutory commitment and have had ample notice of the impending TC rule through the proposed rule and supplemental notices. EPA's analysis overlooks the practical problem of the engineering and construction time involved in coming into compliance, even if a company has completed a regulatory compliance analysis.

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On the other hand, the Agency is allowing an additional six months from the effective date (i.e., one year from today) for generators of greater than 100 but less than 1,000 kg/month of hazardous waste (small quantity generators) to comply with all applicable Subtitle C regulations. (As with the over 1,000 kg/month category, this quantity refers to the total quantity of a generator's hazardous waste, not just newly hazardous TC waste.) EPA acknowledges that the TC rule has the potential to affect an extremely large number of companies not previously subject to hazardous waste regulations; many of these firms are small businesses. The Agency concludes that these companies are less likely to be familiar with the waste management regulations, or because of their small business status, will need more than six months to come into compliance with the regulations. 55 Fed. Reg. at 11842.

For surface impoundments that are newly regulated as hazardous due to this rule, companies must comply with the minimum technology (double liners and groundwater monitoring) requirements by March 29, 1994. However, the retrofiting requirement may be expedited under section 3004(g) and (h) of RCRA. 55 Fed. Reg. at 11835.

Section 3004(g)(4) of RCRA requires that EPA determine within six months of their listing whether newly listed or identified hazardous wastes should be banned from land disposal. Currently, there is a ban on the land disposal of wastewaters that contain vinyl chloride in concentrations greater than or equal to 1000 ppm. See, 40 C.F.R. § 268.32(a)(3). Pursuant to section 3004(g)(4) of RCRA, EPA must decide, by September 29, 1990, whether wastewaters containing vinyl chloride in concentrations greater than or equal to 0.2 ppm should be banned from land disposal. Typically, EPA has made such bans effective immediately. However, pursuant to section 3004(h), EPA may set a later effective date for the land ban. If the land ban is effective immediately, affected companies would have to retrofit any surface impoundments to which wastewaters containing 0.2 ppm or more vinyl chloride are sent by September 29, 1990. See, sections 3004(g)(4), (h) and (o) of RCRA.

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