



300 UNION BOULEVARD, SUITE 600, LAKEWOOD, CO 80228

PHONE: (303) 763-7188

FAX: (303) 763-4896

TECHLAW INC.

January 26, 1999

Mr. Steve Pullen
State of New Mexico Environment Department
Hazardous and Radioactive Material Bureau
P. O. Box 26110
2044 Galisteo
Santa Fe, New Mexico 87502

Dear Mr. Garcia:

Enclosed please find a technical memorandum from Mr. Greg Starkebaum to Ms. June Dreith regarding the regulatory status of the proposed truck wash at the Triassic Park TSDF.

I hope this will assist in your evaluation of the unit. If you have any questions, please call me or Greg at 303-763-7188.

Sincerely,

June K. Dreith
Project Director

enclosure

cc: Benito Garcia, NMED
Cornelius Amindyas, NMED
Robert S. (Stu) Dinwiddle, Ph.D
W. Jordan, TechLaw
M. Nur, TechLaw
G. Starkebaum, TechLaw
K. Dare, TechLaw
D. Romero (file: NMED5)



MEMORANDUM

TO: J. Dreith

FROM: G. Starkebaum

SUBJECT: Triassic Park Truck Wash Regulatory Status

DATE: January 8, 1999

As discussed in our conference call with Mr. Pullen, I researched the RCRA Policy Compendium to attempt to clarify the status of the proposed truck wash at the Triassic Park (TP) TSDF. The application assumes that the truck wash is not subject to permitting requirements, although no rationale is provided to support this assumption. For example, the truck wash is not included in the description of TSD units (Chapter 2), the Waste Analysis Plan (Chapter 4) or the Closure Plan (Chapter 8).

Unfortunately, although numerous EPA letters and memoranda have addressed the generator exemption from permitting requirements, none specifically answer the question of exemption for a truck wash at a commercial TSDF. Therefore, the following is only partially based on the Policy Compendium documents, as noted at the end of the discussion of the TP proposal. There are two main issues to be resolved: will the wash water be hazardous waste; and is the truck wash (or any part of it) a storage or treatment unit subject to permitting requirements?

1. Residues washed out of truck tanks or beds (which are "containers" as defined in 260.10) may or may not be classified as hazardous wastes, depending on the original waste classification, and whether the containers are "empty" as defined in 261.7 before washing begins. TP is proposing to accept a wide variety of listed (261.31, 32 and 33) and acutely toxic (P) wastes (261.33(e)), as well as most characteristic wastes. The truck wash is expected to receive hazardous wastes which must be removed by triple rinsing after removing a damaged inner liner, according to Section 9.1.1 of the application, before the truck-mounted containers can be classified as empty. These wastes (apparently containing P-listed wastes) may be mixed with wastes and wash water from other containers, which may already be "empty" when washing begins. Section 9.1.1 does not mention any plans to wash out rolloffs or other containers which contained wastes which do not require triple rinsing, but the large majority of wastes accepted will be those (non-P) wastes. Such characteristic or toxic (F, K & U) listed wastes or constituents would be non-hazardous and no longer subject to RCRA Subtitle C (or the NM HWA), according to 261.7, if they came from "empty" containers. The truck wash description does not mention the possibility of washing out bulk liquid tankers, but this appears likely since bulk liquids will be accepted for treatment in the stabilization units. If P-listed waste residues are mixed with such other residues from "empty" containers, the entire mixture would be classified as the P waste, according to 261.3(a)(2)(iv). If F and K listed wastes from non-empty containers were also mixed with the wash water, the entire mixture would also be required to be managed as those F and K wastes.

Since the truck wash operating plans are poorly defined and incomplete, it is not possible to definitely determine at this time whether or not the wastes and wash water which will be collected at the truck wash will be hazardous wastes. However, it appears that hazardous waste constituents from (potentially) every type of waste accepted at the facility will be eventually be managed at the truck wash, many of which may be derived from listed P, F and K-listed wastes, and which may be washed out of non-empty containers. The application appears to provide no methods for distinguishing between these wastes, excluding P waste residues, preventing mixing of P-listed residues with other residues, ensuring that containers are empty before washing begins, or characterizing any types of contaminants either before or after collecting, storing, treating and transferring the liquid to the permitted liquid waste storage tank system. Management of sludge from the clarifier tank is not addressed in the application at all.

The so-called “derived-from” and “contained-in” rules (policy guidance- see summary below and attached documents), for treatment residues, leachate, and contaminated environmental media (based on 261.3), provide additional strong support to the above discussion of the applicability of the hazardous waste regulations to both the container washwater and contaminated soil from truck tires, dozer tracks and other equipment. Therefore the wash water and sludge waste streams most likely will be, or should be, subject to all applicable hazardous waste requirements.

Please note that TP could make a stronger case that the truck washout wastewater and sludge is “not subject to regulation”, if they were to provide additional commitments to prevent and prohibit washout of any container that is not empty as defined in 261.7. However, since the only reason given in the current application for the existence of the truck wash (the equipment wash-down area is located on its own separate side of the unit) is to triple-rinse rolloff containers which had damaged liners- which must be expected to have contained P-listed wastes, and were therefore not empty before washing begins- the entire volume of resulting waste(s) must be considered hazardous.

2. The 90-day generator exemption from permitting requirements for storage and treatment units in 262.34 is specifically limited to the generator of the waste. As defined in 260.10, a generator is “... any person, by site, whose act or process produces hazardous waste identified or listed in part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.” A straightforward interpretation of this definition would be that the TP truck wash could not be defined as a point of generation of hazardous waste, because the wastes are either hazardous before they arrive at the truck wash, or non-hazardous because they (may) come from empty containers. No act or process at the TP truck wash would produce a hazardous waste which was not already a hazardous waste, or first cause a hazardous waste to become subject to regulation. TP will not be “generating” hazardous waste at the truck wash. Therefore, any hazardous wastes collected, stored or treated at the truck wash would not be eligible for the generator exemption.

A broader interpretation of 262.34 might view the “processes” of washing out, storing

and treating the truck wash wastes as generation of new waste streams. These processes will change the physical and chemical characteristics of the original wastes (mainly by dilution), although these processes are not intended to treat the wastes or any hazardous constituents or characteristics. Other than dilution in the washwater, the only changes expected are mobilization of some hazardous constituents by the action of detergents or just relatively clean water, and settling of large particulates in the clarifier tank. The original waste classifications should not change, even if some characteristics or constituents are diluted below the limits of detectability. F, K and P-listed waste residues automatically retain their original waste number, and dilution is prohibited by 268.3 as a "treatment" for any waste. In this case, TP would be required only to comply with the applicable generator standards, such as completely draining the sump, wash water and clarifier tanks at least once every 90 days, labeling the tanks as containing hazardous waste, and providing written operating plans and procedures for documentation of waste generation volumes and treatment. (The application does not appear to include these or any other commitment to comply with the generator standards for the truck wash.) In addition to avoiding all 40 CFR 264 permitting requirements, this interpretation would also exempt the truck wash from all of the requirements in 40 CFR 265 subparts G and H (closure and financial assurance) except the general performance standards of 264.111 and 264.114.

The EPA RCRA Permitting Policy Compendium provides some guidance for dealing with a range of rather different situations, or more general explanation. A few examples from the available documents (attached) are summarized below. (Approximately three times as many similar documents were reviewed for relevance to the Triassic Park truck wash.) Policy Compendium document numbers are provided as the identifiers.

Empty Container Guidance

9441.1984(25): This document is a letter from A. Corson (Chief, Studies and Methods Branch), confirming the Agency position that waste residues in "empty" containers as defined in 261.7 are not hazardous wastes.

9441.1984(34): This memo from J. Skinner (Director, Office of Solid Waste) explains the more restrictive interpretation of 262.7(b)(I), i.e., that the one-inch, 3% or 0.3% limits are maximum amounts, and that if a container is not emptied such that "all wastes have been removed that can be removed using the practices commonly employed..., e.g., pouring, pumping, and aspirating..." then the containers are not considered empty (exempt from regulation).

9432.1990(03): This document is a letter from S. Lowrance (Director, Office of Solid Waste) and a lengthy attachment which restates the definition of an "empty" container and provides the regulatory history (Federal Register citations) of the 261.7 rule.

9441.1990(10): This letter from S. Lowrance confirms the previous interpretation that residues washed from "empty" tank cars are exempt from RCRA Subtitle C regulation,

and that such residues are fully subject to regulation if a container is not empty before washing begins.

Treatment Residue Guidance

9441.1981(06): This letter from D. Friedman (Manager, Waste Analysis Program) confirms the interpretation of 261.3(a)(2)(ii), that “If one mixes a listed hazardous waste with a non-hazardous waste the total mixture automatically becomes a hazardous waste.”

9441.1986(05): This is a letter from M. Straus (Chief, Waste Identification Branch), explaining that the waste identification number (hazardous waste code) for a waste treatment residue should be based on the original characteristic (if still present) and any originally listed waste (as applicable). Please note that this letter also states that “...the TSD becomes a generator of the treated waste.” (This last statement could easily be misinterpreted- the definition of “treatment” in 260.10 does not appear to include the collection and storage of washwater and sludge as proposed at the Triassic Park truck wash.)

9441.1992(41): This letter from S. Lowrance restates the 261.3 policy that “...streams consisting of listed hazardous waste retain the same waste code even after mixing and/or treatment. In addition, residuals bearing such waste codes must meet the waste code specific treatment standards specified in 40 CFR 268 prior to land disposal.

Dilution Prohibition Guidance

9551.01-01 (OSWER Directive): This directive from E. Laws (Assistant Administrator) clarifies the Land Disposal Restrictions’ dilution prohibition, in regard to treatment of metal-bearing hazardous wastes in combustion units. However, the general policy statements may apply to the washwater collection and “treatment” (settling or clarification) at the Triassic Park truck wash.

Contained-In Policy Guidance

9443.1989(04) and 9441.1992(34): These letters from S. Lowrance explain the Agency policy (confirmed by the D.C. Court of Appeals) that soil or groundwater that contains or is contaminated by a listed hazardous waste must be managed as hazardous waste. The second letter explains further that “...the authorized State or EPA has the discretion to determine contaminant-specific health-based levels, such that if the concentrations of the hazardous waste constituents were below these levels the media would no longer be considered to contain the waste.”

Tank System Guidance

9483.1986(12): This is a letter from R. Dellinger (Chief, Waste Treatment Branch) interpreting the definition of tank system in 260.10 to include floor drains and trenches

which are used to transfer wastewater contaminated with hazardous wastes as part of a tank's ancillary equipment and containment system, or as a sump (regulated under 264.190(b)).

9521.1994(01): This memo from the OSW Director is directed at hazardous waste fuel blending facilities. Although these are quite different from the proposed Triassic Park truck wash, two general principles stated in the memo may be applicable. 1) The generator exemption from permitting requirements is discussed on page 2; the conclusion is that the exemption is applicable "only if the blending occurs at the site where the wastes being blended are generated." "Thus, fuel blending is treated like any other treatment or storage activity for purposes of qualifying for the ninety-day generator permit exemption." 2) Appropriate unit standards are addressed on page 3. The conclusion is that "...the appropriate permitting authority must decide which unit standards are the most relevant for each specific facility."

Generator Exemption Guidance

9453.1989(01): This RCRA Hotline summary addresses a question regarding whether transporters can be eligible for the 262.34 generator exclusion. The conclusion is, in part: "Mixing two or more wastes does not generate a new waste or make the transporter a generator."

9441.1984(25)

SEP 10 1984

George Noble
Nobel & Associates, Inc.
Westmoreland Building
Old Orchard Road
Skokie, IL 60077

Dear George,

This will recap out telephone conversation and clarify the Agency position on residues from empty containers. EPA recognizes three kinds of empty containers. Containers that hold compressed gas are empty when they approach atmospheric. Containers that hold acutely hazardous waste from §261.33 (e) are empty when they are triple rinsed, the liner is removed, or an equivalent removal method is employed. Rinsate from containers that formerly held an acutely hazardous commercial chemical product is, by the mixture rule, a listed hazardous waste subject to RCRA regulation. All other containers are empty when they have been emptied (by their normal means) and one inch or less remains in the bottom or a given percentage by weight of the contents remains.

Residue that remains in an empty container is not considered, by definition, to be a hazardous waste. The contents of an empty container are only hazardous if they are hazardous by characteristic. As I told you, not all harmful waste would exhibit a characteristic. Although the residue remaining in empty containers is not presently an issue under review, the Agency has retained the the right to regulate it at a future date.

As you know, the 44 States and territories that have instituted hazardous waste programs that operate in lieu of RCRA may have slightly different viewpoints on this issue. You should be familiar with regulatory standards of any States you deal with. The RCRA/Superfund Hotline at 800-424-9346 can send you a copy of the State hazardous waste agency addresses and phone numbers if you need it.

-2-

Although the unregulated residues in empty containers is still of concern, at present EPA resources are being employed for other, higher priority projects. If you have any other questions on the Agency position regarding possible future regulation of residue from empty containers, please let me know.

Sincerely yours,

Alan S. Corson
Chief
Studies and Methods Branch

Noble & Associates Inc

Environmental Consultants
Westmoreland Building
Old Orchard Road
Skokie, Illinois 60077
(312) 677-8410

August 20, 1984

Alan Corson
U.S. Environmental Protection Agency
Washington, DC 20460

Re: Rinsate from Empty Containers

Dear Alan,

Further to our recent telephone conversations, I would like to formally request an opinion on the subject of rinsate from empty containers.

As you know 40CFR261.7, establishes an exemption for "Residues of Hazardous Wastes in Empty Containers." However, the August 18, 1982, preamble to this regulation created an expectation that we might in the near

future see some new regulation which would control these residues after removal from the container.

If I understand you correctly, the current view is that these residues (from empty containers) are thought to be less of a problem than was supposed at the time the preamble was drafted and that EPA does not propose to regulate them.

I would very much appreciate a confirmation of the current EPA position on this subject.

Yours very truly,

Original Document signed

George Noble, P.E.

Copy to: Mark Wright
Steve Rubin

9441.1984(34)

DATE: 28 NOV 1984

SUBJECT: Empty Container Rule

FROM: John H. Skinner, Directory
Office of Solid Waste (WH-562)

TO: Karl J. Klepitsch, Jr., Chief
Waste Management Branch

This is in response to your October 24, 1984, memorandum in which you requested a clarification of the Headquarters position on emptying tank cars. Let me reiterate the position Alan Corson took during his conversation with Gary Victorine and relate it to the information included in your memorandum. At that time, Gary did not emphasize that the tank cars had bottom valves.

Alan told Gary that if only top unloading is available, the tank car is empty only if as much has been removed as possible and no more than an inch or no more than 0.3% of the total capacity (weight) remains. However, the Agency expects bottom valves to be used, when present, if they provide maximum removal of waste.

Likewise, a 55-gallon drum should be emptied as completely as possible. If pouring from an inverted drum removes more residual than a hand pump does, then pouring is obligatory. Of course, removal must be performed to achieve maximum possible removal, not just to the one-inch level of 0.03% capacity, in order to produce an empty container according to 40 CFR §261.7(b)(1).

40 CFR §261.7(b)(1)(i) sites in part: "all wastes have been removed that can be removed using the practices commonly employed....e.g., pouring, pumping, and aspirating..." The August 18, 1982, preamble says that one inch of waste can be left in an empty container only if it remains after performing normal removal operations. Taken together, these citations support the interpretation that all commonly employed emptying methods have to be employed to empty a container. "Commonly employed" refers to the normal practice of industry, not to what a given person does. Thus, containers that have not been subjected to all commonly employed methods of emptying are still subject to regulation.

If you have any further questions on this issue, please do not hesitate to contact Alan Corson of my staff at FTS-382-4770.

cc: Hazardous Waste Branch Chiefs, Regions I-X

9432.1990(03)

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

SEP 13 1990

Charles Winwood
Assistant Commissioner
Office of Inspection and Control
U.S. Customs Service
1301 Constitution Avenue, NW
Washington, D.C. 20229

Dear Mr Winwood:

Thank you for your letter of July 12, 1990 concerning the current and future regulatory status of "empty" containers under 40 CFR 261.7.

Your statement is correct that this section allows, in some cases, up to one inch of residue to remain in a container that held certain hazardous wastes and be considered empty for purposes of the Resource Conservation and Recovery Act (RCRA) regulations. However, the "one-inch" rule is only part of the definition of an "empty container" in 261.7(b). This definition has three parts and is dependent on the type of waste the container held. In other words, how one determines whether a container is empty depends on the material previously contained. Enclosed with this letter for your review, and for the use of your staff, is a discussion of the Agency's interpretation and rationale for this important provision. The current rule was our way of defining when a container no longer poses a serious hazard, but we did not have definitive data to support the conclusion.

I have asked Mike Petruska, Chief of the Waste Characterization Branch, to contact your staff. His Branch is responsible for generator and transporter issues, and I think it appropriate for them to meet as this would allow us to understand more fully your concerns and to discuss alternative regulatory definitions to rectify this situation.

My understanding of your concern is that border inspections of containers may unknowingly expose your agents to hazardous waste through this regulatory definition. This is a legitimate

concern, and you should note that this situation may be rectified through our work on the administration's Export Bill pursuant to

-2-

the Basel Agreement. When it is finalized, it is anticipated that it will subject hazardous waste that is currently exempt from Subtitle C requirements e.g., "empty" containers) to the provisions governing the import and export of hazardous waste. My staff will continue working with your staff to ensure that situations such as this are covered in the final bill.

In the interim, EPA will continue working with Customs on training efforts such as the recently completed U.S. Customs/NEIC training of 500 customs inspectors on the Mexican border. Currently, we are discussing the feasibility of expanding this effort to include joint training of U.S. and Canadian customs officials with Environment Canada. Adequate training for inspection procedures for hazardous waste shipments is probably the best method of ensuring the continued safety of Customs employees.

Thank you for your interest in this issue, I look forward to continuing to work with the Customs Service on hazardous waste issues. If I or my staff can be of any further assistance, please do not hesitate to contact me.

Sincerely,

Original Document signed

Sylvia K. Lowrance
Director
Office of Solid Waste

Enclosure

ENCLOSURE

The definition of "empty" containers in 40 CFR 261.7 has three parts and is dependent on the type of waste the container held. In other words, how one determines whether a container is empty depends on the material previously contained.

The first part of the definition applies to containers which held hazardous wastes other than compressed gases or acute hazardous wastes. For such containers, the regulations provide that an empty container is one from which all wastes have been removed that can be removed using practices commonly employed to remove materials from that type of container, (e.g., pouring, pumping, aspirating), and that no more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner (40 CFR 261.7 (b)(1)(i) and (ii)). Additionally, in the August 18, 1982 Federal Register, the Environmental Protection Agency (EPA) provides a weight alternative to this "one-inch" rule. Specifically, the Agency allows 3 percent by weight of the total capacity of the container to remain in containers that are less than or equal to 110 gallons in size. For containers greater than 110 gallons, an empty container is one from which all residues have been removed by normal means, and no more than 0.3 percent by weight of the total capacity of the container remains in the container (40 CFR 261.7 (b)(1)(iii)).

In the preamble to the August 18, 1982 Federal Register, EPA discusses the incorrect substitution, by members of the regulated community, of the word "or" for the word "and" at the end of paragraph 261.7 (b)(1)(i). This substitution would lead an individual to believe that the practice of leaving one inch of residue in a container qualifies the container as being "empty", whether or not all of the waste has been removed to the extent possible using methods commonly employed. The Agency emphatically states that this is not the case. When the two paragraphs are correctly read together, it is clear that one inch of residue is an overriding constraint, to be utilized only if all wastes cannot be removed by normal practices.

The second part of the definition covers containers which have held hazardous wastes which are compressed gases. For these containers to be considered empty under RCRA, the pressure inside the container must approach atmospheric pressure.

The third part of the definition covers containers that have

held acute hazardous listed in 261.31, 261.32 or 261.33(e). For such a container to meet the definition of "empty" under 261.7(b), the container must be triple rinsed with an appropriate solvent, or in the case of a container with an inner liner, the inner liner must be removed.

-2-

The EPA discusses the rationale for the definition of "empty container" in the preamble of the November 25, 1980 Federal Register (45 FR 78525). "EPA believes that, except where the hazardous waste is an acutely hazardous material listed in 261.33(e), the small amount of hazardous waste residue that remains in individual empty, unrinsed containers does not pose a substantial hazard to human health or the environment." However, EPA was still (and remains) somewhat concerned with unregulated container residues.

This concern was illustrated later in the November preamble, when the Agency set forth three options for regulation of the residues in "empty" containers and solicited comments on these options, as well as any data indicating that unregulated residues may pose a substantial hazard to human health and the environment. The three options were 1) to require triple rinsing for all containers; 2) to regulate the residue when it is removed from a container; and 3) to impose a limit on the amount of unregulated residue. Of the three options presented, EPA considered triple rinsing for all containers to offer the greatest protection to human health and the environment. This approach would ensure that the only container residues left unregulated would be trace amounts remaining after triple rinsing or an equivalent cleaning operation. Thus, if all containers were required to be triple rinsed before they were considered "empty" under RCRA, the potential for environmental and health problems associated with these containers could be substantially reduced.

The Agency addressed the comments received in response to the November 25, 1980 solicitation in the August 18, 1982 Federal Register. Most commenters found the triple rinsing option undesirable and the Agency had no data to support the proposal of the triple rinse option based on the comments received. Accordingly, the Agency has continued to implement the "one-inch" rule (or the 3 percent/0.3 percent alternative) under Federal regulations.

It is also important to note that the shipment of empty containers which have held hazardous wastes may be registered under more stringent or additional State, local, or Federal regulations. For example, under the Department of Transportation (DOT) regulations, a container which has held a hazardous material must be cleaned and purged of its contents before the hazardous material label can be removed (49 CFR 173.29).

9441.1981(06)

OFFICE OF SOLID WASTE

JUN 9 1981

Mr. George Boyd
Pennsylvania Foundrymens Assn.
Suite 512
One Plymouth Meeting
Plymouth Meeting, PA 19462

Dear George:

Your understanding of the operation of the mixing rule in §261.3(a) (2) (ii) is correct. If one mixes a listed hazardous waste with a non-hazardous waste the total waste automatically becomes a hazardous waste. For such a mixture to cease to be a regulated hazardous waste the generator must petition the Agency to delist the mixture. For non-listed hazardous wastes the situation is different.

If a waste becomes a hazardous waste only because it exhibits one or more characteristics (i.e., it is not a listed waste), then if such a waste is mixed with another waste and the mixture does not exhibit any of the characteristics of a hazardous waste, the mixture automatically ceases to be a hazardous waste. Such an action does not require any delisting action by EPA.

I hope this note is sufficient for your needs.

Sincerely,

David Friedman
Manager
Waste Analysis Program
Hazardous and Industrial Waste Division (WH-565)

WH-565/DFriedman:na:x59187:6/3/81 Disk NA-01-30

9441.1986(05)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JAN 16 1986

Mr. John Slemmer
Environmental Manager
Solid Tek Systems, Inc.
5371 Cook Road
P.O. Box 888
Morrow, Georgia 30260-0888

Dear Mr. Slemmer:

This is in response to your letters dated November 27 and December 27, 1985, concerning the identification of residues generated from the treatment of hazardous wastes. In particular, you ask whether the identification numbers that go on the manifest that accompanies the treated waste should be based on the hazardous waste characteristics of the treated waste, the composition of the treated waste, or both.

The answer to this question depends both on which wastes are being treated and the characteristics of the treatment residue. If the TSD facility is treating only characteristic hazardous wastes, the identification number that goes on the manifest for the treatment residue would be that number that is assigned to the characteristic for which the waste still exhibits (i.e., if the treated waste exhibits the characteristic of ignitability, the identification number would be D001). Of course, if the treatment residue no longer exhibits any of the characteristics of hazardous waste, the waste would no longer be hazardous and subject to Subtitle c control. If, on the other hand, the treatment facility treats both listed and characteristic hazardous wastes or just listed hazardous waste, the identification number that goes on the manifest for the treatment residue would be that of the untreated listed waste and that number that corresponds to the characteristic for which the waste exhibits, if any. Thus, in the example provided in your letter, you are correct that the identification number for the treated residue is U012. You are also correct that the TSD becomes a generator of the treated waste.

-2-

I hope this adequately responds to your request. If I can be of any further assistance, please feel free to give me a call at (202) 475-8551.

Sincerely,

Matthew A. Straus
Chief
Waste Identification Branch (WH562B)

9483.1986(12)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 30 1986

Mr. John Albert Slaughter, Jr.
Morton Thiokol, Inc.
P.O. Box 524
Brigham City, Utah 84302

Dear Mr. Slaughter:

This letter is in response to your letter of September 30, 1986, to William Kline of my staff. You requested clarification on the applicability on the recently revised hazardous waste tank system standards to a series of in-building floor drains and outside-building trenches that are used to transfer wastewater contaminated with propellant ingredients to an inground storage tank at Morton Thiokol's Wasatch Operations.

Based on your description of the processes at the Wasatch Operations, I would consider the floor drains as well as the outside-building trenches that are used to transport the waste materials to an inground tank to comprise an integrated tank system used for the management of a hazardous waste. As is explained below, the entire system must comply with the secondary containment requirements of the regulations.

The system you describe appears to fit within the definition of "tank system." In section 260.10 of the regulations, "tank system" is defined as "a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system." "Ancillary equipment" is defined as:

any device including, but not limited to, such devices as piping, fitting, flanges, valves and pumps, that is used to distribute, meter, or control the flow of waste from its point of generation to a storage or treatment tank....

In the system you describe, the hazardous waste is generated when the cleaning process takes place. The in-building collection drains and outside-building trenches are devices used to transfer the hazardous waste to the tank outside the building. Accordingly,

both the collection drains and trenches are ancillary equipment to the tank.

Alternatively, the trenches inside the building may be considered a "sump". Section 260.10 of the regulations defines "sump" as "any pit or reservoir that meets the definition of "tank" and those troughs and trenches connected to it that serve to collect hazardous waste for transport to storage, treatment or disposal facilities." "Tank" is defined by 40 CFR §260.10 as:

a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earth materials... which provide structural support.

The inside trenches clearly fall within that definition.

The hazardous waste tank regulations require that sumps and tank systems meet the requirements for secondary containment unless a variance is obtained or unless a tank or a sump is part of a secondary containment system (see 40 CFR §§264.190(b) and 265.190(b)).

A system in which was water from the periodic cleaning operation is deliberately introduced into the floor drain would need to be provided with secondary containment regardless of whether it is a tank system or a sump system, since the system does not qualify for the exemption for sumps or tanks that are part of secondary containment systems.

EPA's intent to fully regulate sumps that meet the definition of "tank" in the same manner as other tanks was made clear in the preamble of the final rule where EPA stated that " . . . , it is EPA's intention that hazardous waste tank systems, including sumps used to transport hazardous wastes are managed in a manner that would ensure protection of human health and the environment" (51 FR 25441).

Your interpretation that the outside-building trenches and tanks must be managed in accordance with the revised hazardous waste tank system standards, is correct. These "tank systems." However, contrary to your understanding, we believe that the inside-building floor drains, being a integral part of the system, are subject to the same regulations. They are either part of a tank system or are trenches connected to a sump.

-3-

I hope I have adequately addressed your question. If you should have any further questions, please call Bill Kline or me at (202) 382-7917.

Sincerely,

Robert W. Dellinger
Chief, Waste Treatment Branch

cc: RCRA Branch Chief
Region VIII

9441.1990(10)
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE
APR 10 1990

Richard G. Stoll
Freedman, Levy, Kroll, and Simonds
1050 Connecticut Ave. NW
Washington, DC 20036-5366

Dear Mr. Stoll:

This letter responds to your January 15, 1990, request for a regulatory interpretation of 40 CFR 261.7, as it applies to washwaters resulting from the steam-spraying of "empty" tank cars. It is our understanding that "steam-spraying" involves the use of water only, and not additional solvents.

You are correct in your interpretation that the provision found at 40 CFR 261.7, governing residues of hazardous waste remaining in an empty container, applies to such residues when they are removed by steam-spraying. Section 261.7 does exempt the resulting washwaters from RCRA Subtitle C, including the requirement for determining whether a solid waste exhibits a hazardous characteristic under Part 261 Subpart C.

It should also be noted that the exemption at 40 CFR 261.7 applies only to "empty" containers, as defined in that section. If the steam-spraying is conducted on a container that is not empty, or is done in order to render a container empty, the residues are not exempted by 40 CFR 261.7, but rather are fully subject to RCRA Subtitle C.

I should also note that regulatory interpretation applies only to Federal regulations. The appropriate State regulatory agency may have regulations that are more stringent or that may otherwise differ from Federal regulations. I strongly encourage you to seek such regulatory determinations from the appropriate State agencies.

Sincerely,
Original Document signed
"Devereux Barnes for"

Sylvia K. Lowrance
Director
Office of Solid Waste

9521.1994(01)

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

October 17, 1994

MEMORANDUM

SUBJECT: Regulation of Fuel Blending and Related
Treatment and Storage Activities

FROM: Director
Office of Solid Waste

TO: Hazardous Waste Management Division Directors,
Regions I-X

The purpose of this memorandum is to address a number of questions under the Resource Conservation and Recovery Act (RCRA) regarding the regulatory status of hazardous waste fuel blending activities. The memorandum is concerned primarily with facilities that are commonly known as "fuel blenders," although the waste management activities of these facilities most often include a set of integrated waste processing operations more diverse and complex than just the fuel blending activities themselves. A number of issues have been raised regarding the applicability of the RCRA permitting requirements and the land disposal restriction (LDR) requirements to these facilities. The guidance provided below discusses these issues generally. However, since many fuel blending operations are complex, there may be some facility-specific regulatory concerns that are best addressed on a case-by-case basis.

Permit Requirements

The RCRA program regulates hazardous waste storage, treatment and disposal activities with the permitting requirements of 40 CFR Part 270, and with unit-specific standards and other substantive requirements of Parts 264-268. Hazardous waste fuel blending facilities have activities that constitute storage and/or treatment of hazardous wastes. Consequently, they are subject to full RCRA regulation, including permitting, with few exceptions as discussed below.

Fuel blending operations are addressed in Part 266. Specifically, §266.101(c) states that, "owners and operators of facilities that store hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of Parts 264, 265 and 270 of this chapter..." This provision further states, "These standards apply to storage by the burner as well as to storage facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner."

Some fuel blenders have asserted that, since their activities are considered recycling, the blending operation is exempt from permit requirements according to §261.6(c)(1). Section 261.6(a)(2), however, clearly states that hazardous wastes which are recycled materials and are burned for energy recovery" ...are regulated under Subparts C through H of Part 266 of this chapter and all applicable provisions in Parts 270 and 124 of this chapter." This provision makes it clear that fuel blending is not exempt from regulatory standards or permitting.

It is possible that fuel blending in tanks or containers could be exempt from permitting, but only if the blending occurs at the site where the wastes being blended are generated. The permit-exempt management would have to meet the provisions of §262.34, which requires the waste to be processed within 90 days in units that comply with the technical standards of Part 265, Subpart J (for tanks), and Subpart I (for containers). The generator must also comply with specific emergency response and personnel training provisions of Part 265. This permit exemption is not available if the unit is classified under Part 265 as a thermal treatment unit (Subpart P). Thus, fuel blending is treated like any other treatment or storage activity for purposes of qualifying for the ninety-day generator permit exemption.

There may be some recycling operations at a fuel blending facility that are exempt from permitting, even though the fuel blending process itself is not exempt. The exemption is only available to units that are solely engaged in permit-exempt recycling; if the reclaimed materials are sometimes sent for use as a fuel, then the recycling unit would be subject to the permitting standards. In States that are authorized for the RCRA program, the State recycling exemptions must be as stringent as the Federal program.

Appropriate Unit Standards

Most fuel blending facilities employ unit operations that are regulated under the tank standards of Subpart J of either Part 264 or 265. However, some facilities are using other devices such as shredders, grinders, filters, microwave units and distillation columns in their hazardous waste management operations. Depending on the specific configuration of these operations, they are permitted as either tank systems (including ancillary equipment) or as miscellaneous units under Subpart X. Furthermore, additional permit conditions may be imposed using the omnibus-authority of RCRA Section 300S(c)(3) as necessary to protect human health and the environment. Since these operations vary from site to site, the appropriate permitting authority (the State or EPA Regional Office) must decide which unit standards are the most relevant for each specific facility.

Air Emission Standards

Another question that has been raised concerns the applicability of the organic air emission standards for process vents and equipment leaks (Subparts AA and BB, Parts 264/265). These standards limit organic emissions from (1) process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping operations that manage hazardous wastes with 10 parts per million by weight (ppmw) or greater total organic concentration, and (2) leaks from equipment that contains or contacts hazardous waste streams with 10 percent by weight or greater total organics. Due to the typically high organic content of the hazardous wastes managed at fuel blending facilities, we would expect the Subpart AA and BB requirements to be applicable.

The AA and BB requirements are also applicable to hazardous waste recycling units if they are located at hazardous waste management facilities that have other units subject to permitting. Although some recycling units are exempt from the unit-specific standards of Parts 264 and 265 pursuant to §261.6(c), such units must comply with any applicable AA and BB requirements of those Parts. See §261.6 (d).

On July 22, 1991 (56 FR 33490), the Agency proposed unit-specific air emission standards that would provide additional controls on tanks, containers, and Subpart X units, among others. When these standards are promulgated as final rules (promulgation is scheduled for November 15, 1994), they will be applicable to fuel blender facilities.

Transfer Facilities

Transfer facilities are those transportation related sites including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous wastes are held or repackaged during the normal course of transportation. Section 263.12 allows these facilities to store wastes in containers without RCRA permits as long as specific packing requirements are followed and the wastes do not remain on-site for more than 10 days. Transfer operations are limited to bulking and consolidation of wastes. Selective blending of hazardous waste fuels to meet a fuel specification at a transfer facility is not an appropriate activity under §263.12; this would constitute hazardous waste treatment requiring a permit.

Land Disposal Restrictions

Generators

Generators of prohibited hazardous wastes (i.e. hazardous wastes required to meet a treatment standard before they can be land disposed) must comply with certain notification, certification, and recordkeeping requirements designed to assure proper tracking of the waste and adequate notice to the treatment facility of applicable treatment standards, as set forth in 40 CFR 268.7(a). (Note that if an offsite fuel blender/multi-purpose facility treats or otherwise manages a waste such that a new point of generation occurs, then the offsite facility becomes a generator and is therefore subject to these generator requirements.) These provisions apply whenever a generator ships a prohibited waste to another entity for eventual land disposal, and so apply when generators send prohibited wastes to fuel blenders/multi-purpose treatment/storage facilities. Although the wastes may be combusted, some residue (such as combustion ash) would be land disposed and must meet the treatment standard applicable to the combusted hazardous waste (as discussed at 58 FR 29872; May 24, 1993). Information normally required to be included in the notice are:

- EPA hazardous waste number
- constituents of concern
- treatability group
- manifest number waste analysis data (where available)

According to §268.9(a), these provisions also apply when generators send characteristic wastes off-site. If the generator treats the characteristic waste to make it non-hazardous before sending it to a fuel blender/multi-purpose facility, a one-time notice and certification must be placed in the generator's files and also be sent to the EPA region or authorized State, according to §268.9(d). This one-time notice provision applies only to cases where wastes are hazardous by reason of characteristic alone, (as discussed in 55 FR 22662-63; June 1, 1990), and so does not apply when a mixture includes a listed waste.

There are circumstances where an otherwise-prohibited waste destined for combustion may not be subject to LDR requirements (including the tracking requirements) because neither the waste nor the residue from treating the waste is subject to a treatment standard when land disposed. This could occur where hazardous wastes are going to be burned for energy recovery in a Bevill device, such as a boiler or cement kiln. If the wastes are burned for energy recovery in a Bevill device that processes normal Bevill raw materials as well, and the Bevill device can show that its residues were not significantly affected by its hazardous waste-burning activities (the "significantly affected" test is found in 40 CFR 266.112), then the residues can retain Bevill-exempt status and not have to meet LDR treatment standards. Further, if the Bevill device produces a product that is used in a manner constituting disposal (e.g., a cement or light-weight aggregate kiln), and the hazardous waste is burned for energy recovery rather than for destruction or as an ingredient, then the product is not required to meet LDR treatment standards: In these situations where neither residues nor products are subject to LDR treatment standards, the original generator's waste would not be considered prohibited from land disposal. According to §268.7(a)(6), if such a generator can assure that the conditions discussed above are all true regarding the disposition of its otherwise prohibited waste, then the generator is only required to prepare a one-time notice for its facility records documenting this disposition and not to comply with other tracking/notification requirements. If a generator is not in a position to know that this is the case, then the full notification/certification requirements under §268.7(a) would apply.

Fuel Blending Facilities

According to §268.7(b), treatment facilities (e.g., fuel

blenders, BIFs, etc.) must also prepare a notification and certification for prohibited wastes. These provisions ordinarily apply to fuel blending operations because combustion residues are ultimately land disposed and the combustion residue ordinarily remains subject to LDR treatment standards. These treatment standards would continue to apply to characteristic wastes that no longer exhibit a characteristic when land disposed, according to §268.40(e), so that de-characterized residues from burning prohibited characteristic wastes are still subject to treatment standards. (Note, that for DOO1 wastes, combustion residues meet the BDAT standard since these standards require a method of treatment rather than treating hazardous constituents to a specified concentration level.)

Because fuel blenders are intermediate treatment operations, they must comply with §268.7(b)(6) (assuming the intermediate treatment does not fully achieve the treatment standard). Specifically, this section requires the fuel blender to prepare the same notification and certification that is required for generators, which in some cases will be the one-time notification discussed for generators above and in other cases will be applicable to each waste shipment. The notification and certification would accompany the blended fuel when it leaves the site to be transported to the subsequent treater (e.g., BIF).

If you have any questions on the applicability of the regulations and permitting requirements for fuel blending activities, please call James Michael of my staff at (703) 308-8610. Questions on the applicability of the land disposal restrictions (LDR) on fuel blending activities should be directed to Rhonda Craig of my staff at (703) 308-8771.

RCRA Branch Chiefs, Regions I-X
RCRA Permit Section Chiefs, Regions I-X
Enforcement Section Chiefs, Regions I-X
Waste Combustion Permit Writers' Workgroup

cc: Dev Barnes, PSPD; Frank McAlister, PSPD; Jim Michael, PSPD; Sonya Sasseville, PSPD; Jeff Gaines, PSPD; Fred Chanania, WMD; Bob Holloway, WMD; Frank Behan, WMD; Mitch Kidwell, CAD; Larry Starfield, OGC; Steve Silverman, OGC; Brian Grant, OGC; Susan O'Keefe, OECA; Kate Anderson, OECA; Jim Thompson, OECA

9441.1992(41)

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

November 30, 1992

Mr. John L. Andersen
Environmental Control Director
Georgia Pacific Corporation
Post Office Box 1236
Bellingham, Washington 98227-1236

Dear Mr. Andersen:

Thank you for your letter of September 21, 1992, requesting a determination of the regulatory status of one of the waste streams generated by your treatment process.

In your letter and attached materials, you identified the feed materials to the treatment process as a mixture of D009, K071 and K106. Under current federal regulations, specifically 40 CFR 261.3, streams consisting of listed hazardous waste retain the same waste codes even after mixing and/or treatment. In addition, residuals bearing such waste codes must meet the waste code specific treatment standards specified in 40 CFR 268 prior to land disposal.

Given the facts presented in your letter, the treatment residuals would retain the D009, K071, and K106 waste codes. This would, in turn, determine your obligations under the land disposal restrictions program.

We hope this information clarifies the matter.

Sincerely,
Sylvia K. Lowrance, Director
Office of Solid Waste

9443.1989(04)

MAY 23 1989

Honorable Lloyd M. Bentsen
United States Senator
961 Federal Building
Austin, Texas 78701

Dear Senator Bentsen:

Thank you for your April 24, 1989, letter regarding Hollis E. Ervin's concerns about the March 14, 1989, court opinion supporting the Environmental Protection Agency's (EPA) interpretation of the regulatory status of contaminated environmental media (such as soil and ground water).

EPA believes that a hazardous waste does not necessarily lose its hazardous characteristic when it is combined with an environmental medium, and that, unless demonstrated otherwise, the contaminated medium should be managed as a hazardous waste because it contains a hazardous waste. (The environmental medium itself is not a hazardous waste.) To consider contaminated media as newly generated wastes for purposes of determining whether they are hazardous could be an incentive for the purposeful contamination of environmental media with hazardous waste in an effort to avoid regulations otherwise applicable.

EPA has established a process under which persons may petition the Agency to have their waste removed from regulatory control on a case-by-case basis (sometimes called "delisting"). Under this process, EPA evaluates the waste in question and determines whether it needs to be regulated as a hazardous waste. In addition, EPA is currently examining ways to streamline this process - e.g., setting de minimis levels of contaminants which, when met, would allow for the management of wastes outside the structure of the hazardous waste regulations.

As found by the D.C. Court of Appeals, the "contained in" rule has been a consistent and reasonable interpretation since the promulgation of the applicable regulations in 1980. To change an established regulatory interpretation, the Agency is required to provide notice and an opportunity for public

comment (i.e., regulatory interpretations cannot be changed at the "whim" of EPA).

-2-

Thank you for your interest in the hazardous waste program. If I can be of further assistance to you, please feel free to call me, or have your staff contact Bob Dellinger at (202) 475-8551.

Sincerely yours,

Sylvia K. Lowrance, Director
Office of Solid Waste

OS305/DELLINGER/T. MCMANUS - 382-4646/CSH/5-16-89/
CONTROL #AL892146/DUE DATE:5-19-89/DISK #23/NAME:BENTSEN

9441.1992(34)

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

October 15, 1992

Mr. William L. Warren
Cohen, Shapiro, Polisher, Sheikman and Cohen
1009 Lenox Drive, Building Four
Lawrenceville, New Jersey 08648

Dear Mr. Warren:

I am pleased to respond to your letter of August 26, 1992, in which you requested clarification of several issues relating to the regulatory status of soils contaminated from releases of commercial chemical products.

The example outlined in your letter dealt specifically with leakage of carbon tetrachloride from a tank. Since the carbon tetrachloride has been "discarded" in this case, it would be identified as U-211 listed hazardous waste. The key question posed in your letter is whether the resulting contaminated soil is hazardous waste, and under what circumstances it would be subject to hazardous waste management requirements.

Under EPA's regulatory definition of hazardous waste in §261.3(c)(1), soils that contain hazardous wastes must be managed as if they were hazardous wastes until or unless they no longer contain the listed waste, exhibit a characteristic, or are delisted (see 57 Fed. Reg. 37225, Aug. 18, 1992). Under the "contained-in policy" the authorized State or EPA has the discretion to determine contaminant-specific health-based levels, such that if the concentrations of the hazardous waste constituents were below those levels the media would no longer be considered to contain the waste. This applies to "U" listed wastes, and other listed wastes. The health-based levels used in making contained-in determinations are established on a site-specific basis, in accordance with general State or Federal guidelines, or by means of a site specific risk assessment. This discretion is available to the State Administrator in an authorized State, or otherwise is vested in the EPA Regional Administrator.

In the example outlined in your letter, you state that the contaminant levels are below the State's remedial requirements. As such, it may be that the State would determine that the soils do not contain hazardous wastes. If such is the case, and assuming the State is authorized for the RCRA program, there would be no RCRA hazardous waste management requirements applicable to the soils before or during excavations incident to removal of the tank.

I hope this has helped to clarify the issues you raised. If you have any further questions, please contact Dave Fagan at 202 260-4497.

Sincerely,
Sylvia K. Lowrance, Director
Office of Solid Waste

Attachment

Cohen, Shapiro, Polisher, Sheikman and Cohen
1009 Lenox Drive, Building Four
Lawrenceville, New Jersey 08648
(609) 895-1329

October 19, 1992

Ms. Sylvia Lowrance
Office of Solid Waste
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Ms. Lowrance:

This is a follow up to my letters of January 20, July 16 and August 26, 1992. As stated in that letter, I am attempting to determine whether contaminated soils under certain very specific circumstances are considered to be a RCRA hazardous waste. The specific circumstances for which I require guidance are as follows:

1. A tank containing virgin carbon tetrachloride leaks. As a waste, carbon tetrachloride is listed by the Agency as U-211.
2. The soil around the tank is sampled and found to be

contaminated with carbon tetrachloride. However, the contamination is below state remedial requirements. State policy and/or regulations does not require any remedial activity with respect to the contaminated soils.

Under these circumstances, I would like to know whether the undisturbed contaminated soil is deemed by the EPA to be a RCRA hazardous waste or is required to be managed as a RCRA hazardous waste. If it is deemed to be a RCRA hazardous waste or required to be managed as such, could you please explain the basis for this determination. If it is not deemed to be a RCRA hazardous waste or required to be managed as such, I would like to know whether any of this contaminated soil which is excavated incident to the removal of the tank (as opposed to four purposes of addressing the spill; something which state law does not require because of the low level of contamination found in the soil) is deemed to be a RCRA hazardous waste required to be managed as such, or whether, because it was not excavated to address the spill and therefore is not waste or for any other reason, it is not deemed to be a RCRA hazardous waste and may therefore be returned to the excavation.

I look forward to hearing from you in the near future and appreciate your kind assistance in this matter.

Yours very truly,
William L. Warren

Attachment

Cohen, Shapiro, Polisher, Sheikman and Cohen
1009 Lenox Drive, Building Four
Lawrenceville, New Jersey 08648

August 26, 1992

Ms. Sylvia Lowrance
Office of Solid Waste
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Ms. Lowrance:

This is a follow up to my letters of January 20 and July 16,

1992. As stated in that letter, I am attempting to determine whether contaminated soils under certain very specific circumstances are considered to be a RCRA hazardous waste. The specific circumstances for which I require guidance are as follows:

1. A tank containing virgin carbon tetrachloride leaks. As a waste, carbon tetrachloride is listed by the Agency as U-211.
2. The soil around the tank is sampled and found to be contaminated with carbon tetrachloride. However, the contamination is below state remedial requirements. State policy and/or regulations does not require any remedial activity with respect to the contaminated soils.

Under these circumstances, I would like to know whether the undisturbed contaminated soil is deemed by the EPA to be a RCRA hazardous waste or is required to be managed as a RCRA hazardous waste. If it is deemed to be a RCRA hazardous waste or required to be managed as such, could you please explain the basis for this determination. If it is not deemed to be a RCRA hazardous waste or required to be managed as such, I would like to know whether any of this contaminated soil which is excavated incident to the removal of the tank (as opposed to four purposes of addressing the spill; something which state law does not require because of the low level of contamination found in the soil) is deemed to be a RCRA hazardous waste required to be managed as such, or whether, because it was not excavated to address the spill and therefore is not waste or for any other reason, it is not deemed to be a RCRA hazardous waste and may therefore be returned to the excavation.

I look forward to hearing from you in the near future and appreciate your kind assistance in this matter.

Yours very truly,
William L. Warren

9453.1989(01)

RCRA/SUPERFUND HOTLINE MONTHLY SUMMARY

APRIL 89

2. Generator Standards Applicable to Transporters

Are transporters eligible for the Section 262.34 accumulation time provision when they mix wastes?

No. The accumulation time provision only applies to generators. Mixing two or more wastes does not generate a new waste or make the transporter a generator. Therefore, transporters are not eligible for the accumulation time. The transporter may hold the waste pursuant to Section 263.12 for ten days or less at a transfer facility. Storage periods of greater than ten days will require the facility to apply for a permit or interim status.

Source: Emily Roth (202) 382-4777

Research: Joe Nixon (202) 488-1487

OSWER DIRECTIVE #9551.01-01

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

May 23, 1994

MEMORANDUM

SUBJECT: RCRA Policy Statement: Clarification of the Land Disposal
Restrictions' Dilution Prohibition and Combustion of Inorganic
Metal-Bearing Hazardous Wastes

FROM: Elliott P. Laws
Assistant Administrator

TO: Waste Management Division Directors, Regions I - X

I. Introduction

A. Purpose

This memorandum sets out a Statement of Policy under the Resource Conservation and Recovery Act (RCRA) clarifying the application of the Land Disposal Restrictions (LDR) prohibition on dilution (see 40 CFR § 268.3) to combustion (see Footnote 1) of certain inorganic metal-bearing hazardous wastes. Because combustion normally does not represent effective treatment of these wastes, such burning can be considered impermissible dilution. In such cases, these hazardous metal-bearing wastes cannot be combusted legally. This Policy Statement clarifies the general situation regarding combustion of these metal-bearing hazardous wastes, but application of this policy will vary depending on particular circumstances.

B. Regulatory Background

Under RCRA, the LDR prohibition on dilution states generally that no person "shall in any way dilute a restricted waste ... as a substitute for adequate treatment to achieve compliance with [a treatment standard for that waste]". 40 CFR 268.3(a). This prohibition implements the requirement of section 3004(m) of RCRA, which requires that hazardous constituents in hazardous wastes be destroyed, removed or immobilized before these wastes can be land disposed. Hazardous constituents are not destroyed, removed or immobilized if they are diluted. *Chemical Waste Management v. EPA*, 976 F.2d

2, 16, 17, 19-20 (D.C. Cir. 1992), cert. denied 113 S.Ct. 1961 (1993); see also S. Rep. No. 298, 98th Cong. 1st Sess. 17 (1983) ("the dilution of wastes by the addition of other hazardous waste or any other materials during waste handling, transportation, treatment or storage is not an acceptable method of treatment to reduce the concentration of hazardous constituents").

Consistent with these authorities, the Agency has stated that the dilution prohibition serves one chief purpose -- "to ensure that prohibited wastes (see Footnote 2) are treated by methods that are appropriate for that type of waste." 55 FR at 22532 (June 1, 1990). Impermissible dilution can occur under a number of circumstances. The most obvious is when solid wastes are added to a prohibited waste to reduce concentrations but not volumes of hazardous constituents, or to mask their presence. Impermissible dilution also may occur when wastes not amenable to treatment by a certain method (i.e., treated very ineffectively by that treatment method) are nevertheless 'treated' by that method. 55 FR 22666 (June 1, 1990) (biological treatment does not effectively remove toxic metals from wastes; therefore, prohibited wastes with treatment standards for metals ordinarily would be impermissibly diluted if managed in biological treatment systems providing no separate treatment for the metals). See also 52 FR at 25778-79 (July 8, 1987) (impoundments which primarily evaporate hazardous constituents do not qualify as section 3005(j)(11) impoundments which may receive otherwise-prohibited hazardous wastes that have not met the treatment standard).

EPA is providing guidance today clarifying how the LDR dilution prohibition could apply to certain inorganic metal-bearing hazardous wastes that may be placed in combustion units, other than metal recovery furnaces.

II. General Distinction Between "Adequate Treatment" and Potential Violations of the Dilution Prohibition

This memorandum deals with the question of whether combustion of prohibited inorganic hazardous wastes can be a type of impermissible dilution.

An "inorganic hazardous waste" is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content (see further discussion, last paragraph page 3, clarifying what constitutes an insignificant organic or cyanide content).

The Agency has evaluated the listed wastes and has determined that 44 of the RCRA listed wastes (as set forth in 40 CFR § 261) typically appear to be such inorganic hazardous wastes; i.e., they typically do not contain organics, or contain only insignificant amounts of organics, and are not regulated for organics (see Footnote 3) (see Appendix A to this memorandum for a list of

these wastes). The Best Demonstrated Available Technology (BDAT) for these inorganic, metal-bearing listed wastes is metal recovery or stabilization. Thus, impermissible dilution may result when these wastes are combusted.

There are eight characteristic metal waste codes; however, only wastes that exhibit both the toxicity characteristic (TC) and the extraction procedure (EP) for D004 - D011 are prohibited now (see 55 FR 22660-02, June 1, 1990). Characteristic wastes, of course, cannot be generically characterized as easily as listed wastes because they can be generated from many different types of processes. For example, although some characteristic metal wastes do not contain organics or cyanide or contain only insignificant amounts, others may have organics or cyanide present which justify combustion, such as a used oil exhibiting the TC characteristic for a metal. Thus, it is difficult to say which D004-D011 wastes would be impermissibly diluted when combusted, beyond stating that as a general matter, impermissible dilution would occur if the D004-D011 waste does not have significant organic or cyanide content but is nevertheless combusted.

EPA ordinarily would not consider the following hazardous wastes to be strictly inorganic (or to contain "significant organic or cyanide content") for which combustion would otherwise be impermissible dilution. Combustion of the following wastes is therefore not prohibited under the LDR dilution prohibition: (1) any of the 44 listed wastes and 8 characteristic wastes in Appendix A that, at point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, contain hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard for F039, which represents a compilation of numerical limits for hazardous constituents; (2) organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste; and (3) any of the 44 listed wastes and 8 characteristic wastes that, at point of generation, have reasonable heating value such as greater than or equal to 5000 Btu (see 48 FR 11157 (March 16, 1983)). The foregoing three categories of waste typically would contain sufficient organic content to indicate that combustion can be a reasonable means of treating the wastes prior to land disposal. However, as noted above, mixing practices such as fuel blending to add organics to inorganic metal-bearing hazardous wastes ordinarily would be considered to be impermissible dilution. This is because the dilution prohibition applies at the point a hazardous waste is generated. *Chemical Waste Management v. EPA*, 976 F.2d at 22-3; also 48 FR 11158, 11159 and nn. 2 and 4 (March 16, 1983); 53 FR at 522 (Jan. 8, 1988) (determinations of legitimacy of recycling are made on a waste-by-waste basis before any blending occurs).

This Policy Statement is also reflective of the Agency's concerns about the hazard presented by toxic metals in the environment. When an inorganic

metal-bearing hazardous waste with insignificant organics is placed in a combustion unit, legitimate treatment for purposes of LDR ordinarily is not occurring. No treatment of the inorganic component occurs during combustion, and therefore, metals are not destroyed, removed, or immobilized. Since there are no significant concentrations of organic compounds in inorganic metal-bearing hazardous wastes, it cannot be maintained that the waste is being properly or effectively treated via combustion (i.e., thermally treated or destroyed, removed, or immobilized).

In terms of the dilution prohibition, if combustion is allowed as a method to achieve a treatment standard for these wastes, metals in these wastes will be dispersed to the ambient air and will be diluted by being mixed in with combustion ash from other waste streams. Adequate treatment (stabilization or metal recovery to meet LDR treatment standards) has not been performed and dilution has occurred. It is also inappropriate to regard eventual stabilizing of such combustion ash as providing adequate treatment for purposes of the LDRs. Simply meeting the numerical BDAT standards for the ash fails to account for metals in the original waste stream that were emitted to the air and for reductions achieved by dilution with other materials in the ash. (In most cases, of course, the metal-bearing wastes will have been mixed with other wastes before combustion, which mixing itself could be viewed as impermissible dilution).

These inorganic, metal-bearing hazardous wastes should be and are usually treated by metal recovery or stabilization technologies. These technologies remove hazardous constituents through recovery in products, or immobilize them, and are therefore permissible BDAT treatment methods. However, EPA believes that this statement of policy clarifying application of LDR dilution prohibition is needed because we have observed that some of these wastes may be going to conventional combustion devices such as incinerators or cement kilns. For example, some owners/operators may be willing to accept inorganic lead wastes with insignificant organics at their combustion facilities (which can still apparently meet their air emissions limits at the stack). As explained above, land disposal of combustion residuals from these facilities would typically violate the land disposal restrictions prohibition on dilution. Combustion is not usually an appropriate treatment for these wastes because hazardous constituents are not removed, destroyed, or immobilized.

Consequently, the general principles set out in this memorandum, subject to appropriate consideration of individual circumstances, are: (1) that a prohibited inorganic metal-containing hazardous waste (listed in Appendix A to this memorandum) without significant organic content can be considered to be diluted impermissibly when combusted (even if the treatment standards for metals are achieved in part by subsequent treatment of combustion ash); and

(2) that the determination of whether a waste is an inorganic metal-bearing hazardous waste is made at the point of generation. (see Footnote 4) This means that, ordinarily, such a waste would be considered to be diluted impermissibly even if it is blended with organic wastes for which combustion would otherwise be an appropriate treatment method.

Footnote 1 - Combustion for purposes of this memo does not include metal recovery units engaged in metal reclamation or vitrification units engaged in metal stabilization.

Footnote 2 - A "prohibited" hazardous waste is one which is actually subject to a prohibition on land disposal without first being treated, or disposed in a no-migration unit. See 54 FR 36968 (Sept. 6, 1989)

Footnote 3 - To the extent that these wastes or residues of these wastes (i.e., biological treatment sludges) contain significant organic content, combustion may be an appropriate treatment technology. See later discussion regarding this point.

Footnote 4 - This is the point at which the waste becomes hazardous. (See 45 FR 33095-33096, May 19, 1980).

Appendix A. Description of Wastes Affected by this Policy

Waste Code	Listed Wastes
F006* (see below)	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007*	Spent cyanide plating bath solutions from electroplating operations.
F008*	Plating bath residues from the bottom of

	plating baths from electroplating operations where cyanides are used in the process.		
F009*	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.		
F010*	Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.		
F011*	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.		
F012*	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.		
F019*	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.		
K003	Wastewater treatment sludge from the production of molybdate orange pigments.		
K004	Wastewater treatment sludge from the production of zinc yellow pigments.		
K005	Wastewater treatment sludge from the production of chrome green pigments.		
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).		
K007	Wastewater treatment sludge from the production of iron blue pigments.		

K008	Oven residue from the production of chrome oxide green pigments.		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.		
K069	Emission control dust/sludge from secondary lead smelting.		
K071	Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.		
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.		
K106	Sludges from the mercury cell processes for making chlorine.		
P010	Arsenic acid H_3AsO_4		
P011	Arsenic oxide As_2O_5		
P012	Arsenic trioxide		
P013*	Barium cyanide		
P015	Beryllium		
P029*	Copper cyanide $Cu(CN)$		
P074*	Nickel cyanide $Ni(CN)_2$		
P087	Osmium tetroxide		
P099	Potassium silver cyanide		
P104*	Silver cyanide		
P113	Thallic oxide		
P114	Thallium (1) selenite		

P115	Thallium (I) sulfate	
P119	Ammonium vanadate	
P120	Vanadium oxide V2O5	
P121*	Zinc cyanide	
P122	Zinc phosphide	
U032	Calcium chromate	
U145	Lead phosphate	
U151	Mercury	
U204	Selenious acid	
U205	Selenium disulfide	
U216	Thallium (I) chloride	
U217	Thallium (I) nitrate	

Waste Code	Characteristic Wastes	
D004	Arsenic	
D005	Barium	
D006	Cadmium	
D007	Chromium	
D008	Lead	
D009	Mercury	
D010	Selenium	

D011

Silver

* = Assuming wastes do not contain treatable concentrations of cyanide.