Mary Ann Chance

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Mary Ann Chance
Environmental Administrator
Environmental Conservation

Enc: Federal Register, October 30, 1980
"Hazardous Waste Management System: Identification and Listing of Hazardous Waste, and Interim Status Standards for Owners and Operators of Treatment, Storage, and Disposal Facilities; Final, Interim, and Proposed Regulations"

Environment Reporter, 10-24-80, "Solid Waste"

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October 30, 1980

Part XI

Environmental Protection Agency

Hazardous Waste Management Syst m: Identification and Listing of Hazard us Waste, and Interim Status Standards for Owners and Operators of Treatment, Storage, and Disposal Facilities; Final, Interim, and Proposed Regulations

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260 and 261

[SW FRL 1642-4]

Hazard us Waste Management System; General and Identification and Listing of Hazardous Waste

AGENCY: Environmental Protection Agency.

ACTI N: Interim final amendment to rule and request for comments.

SUMMARY: This regulation amends 40 CFR 261.4 to provide that a hazardous waste that is generated in a product or raw material storage tank, transport vehicle or vessel or in a manufacturing process unit is not subject to regulation under 40 CFR Parts 262 through 265 or Parts 122 through 124 or the requirements of Section 3010 of the Resource Conservation and Recovery Act (RCRA) until it is removed from the unit in which it was generated, unless the unit in which it is generated is a surface impoundment or unless the hazardous waste remains in the unit for more than 90 days after the unit ceases to be operated for the purpose of storing or transporting product or raw materials or manufacturing. This regulation also amends 40 CFR 260.10 to modify the definition of "generator" so that it clearly covers persons who remove hazardous wastes from product or raw material storage tanks, transport vehicles or vessels, or manufacturing process units in which the hazardous waste is generated. Finally, this regulation amends 40 CFR 260.10 to add definitions for "transport vehicle" and "vessel." The purpose of this requirement is to allow persons handling hazardous wastes sufficient lead time to prepare to comply with major new regulatory requirements. The effect of these amendments is to reduce the overall costs, economic impact and reporting and recordkeeping impacts of EPA's hazardous waste management regulations.

DATES: Effective Date: For the amendment to 40 CFR 261.4 and the definitions of "transport vehicle" and "vessel," in 40 CFR 260.10, November 19, 1980.

For the amendment to the definition of "generator," in 40 CFR 260.10, April 30, 1981.

Comment Date: This amendment is promulgated as an interim final rule. The Agency will accept comments on it until December 29, 1980.

ADDRESSES: Comments on the amendment should be sent to Docket Clerk [Docket No. 3001], Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: For general information, contact Alfred W. Lindsey, Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, (202) 755-9185. For information on implementation, contact:

Region I, Dennis Huebner, Chief, Radiation, Waste Management Branch, John F. Kennedy Building, Boston, Massachusetts 02203, (617) 223-5777

Region II, Dr. Ernest Regna, Chief, Solid Waste Branch, 26 Federal Plaza, New York, New York 10007, (212) 264-0504/5

Region III, Robert L. Allen, Chief, Hazardous Materials Branch, 6th and Walnut Streets, Philadelphia, Pennsylvania 19106, (215) 597-0980

Region IV, James Scarbrough, Chief, Residuals Management Branch, 345 Courtland Street, N.E., Atlanta, Georgia 30365, (404) 881-3016

Region V, Karl J. Klepitsch, Jr., Chief, Waste Management Branch, 230 South Dearborn Street, Chicago, Illinois 60604, (312) 886-6148

Region VI, R. Stan Jorgensen, Acting Chief, Solid Waste Branch, 1201 Elm Street, First International Building, Dallas, Texas 75270, (214) 787-2645

Region VII, Robert L. Morby, Chief, Hazardous Materials Branch, 324 E. 11th Street, Kansas City, Missouri 64106, (816) 374-3307

Region VIII, Lawrence P. Gazda, Chief, Waste Management Branch, 1860 Lincoln Street, Denver, Colorado 80203, (303) 837-2221

Region IX, Arnold R. Den, Chief, Hazardous Materials Branch, 215 Fremont Street, San Francisco, California 94105, (415) 556-4606

Region X, Kenneth D. Feigner, Chief, Waste Management Branch, 1200 Sixth Avenue, Seattle, Washington 98101, (206) 442-1260.

SUPPLEMENTARY INFORMATION:

I. Amendment to 40 CFR 261.4

On February 26 and May 19, 1980, EPA promulgated hazardous waste regulations in 40 CFR Parts 260 through 265 (45 FR 12721 et seq. and 45 FR 33066 et seq.) and on May 19, 1980, promulgated consolidated permit regulations in 40 CFR Parts 122 through 124 (45 FR 33289 et seq.). Section 261.2 of these regulations provides that a solid waste is any garbage, refuse or sludge, or any other waste material which is (1) discarded or is being accumulated, stored or physically, chemically or biologically treated prior to being discarded; or (2) has served its original intended use and sometimes is discarded; or (3) is a manufacturing or mining by-product and sometimes is discarded. Section 261.3 provides that a solid waste becomes a hazardous waste when (1) it first meets any of the listing descriptions set forth in Part 261, Subpart D; or (2) it first becomes a mixture containing a hazardous waste listed in Part 261, Subpart D; or (3) it first exhibits one or more of the characteristics of hazardous waste identified in Part 261, Subpart C. Section 261.1 provides that hazardous wastes identified in Part 261 are subject to regulation under Parts 262 through 265 and Parts 122 through 124. The effect of these provisions, particularly § 261.3(b), is to make hazardous wastes subject to regulation at the point where they are generated. The point of generation, however, may be a product or raw material storage tank, transport vehicle or vessel, or a manufacturing process unit. A literal application of the Part 261 regulations would mean that such units are hazardous waste storage facilities, and that their owners and operators must comply with the notification requirements of Section 3010 of RCRA, submit applications for and obtain permits under Part 122 and comply with the Interim Status Standards of Part 265 until a permit is issued or denied. An exception to these requirements is provided in § 262.34 which states that hazardous waste may be accumulated on the site of its generation without a permit for 90 days or less before it is removed and transported off-site for treatment, storage or disposal. For such accumulation, the owner and operator of the unit must notify under Section 3010 and comply with § 262.34, including requirements for containerization, labelling, marking, inspection and personnel training.

Many members of the regulated community have questioned the Agency's intent and wisdom in regulating those units in which hazardous wastes are first generated. These people claim that such units only incidentally hold or treat hazardous wastes and thus should not be subject to the regulations. They contend that such hazardous wastes do not pose a hazard to human health or the environment while they remain in these units.

Commenters on this issue provided several examples of units in which hazardous wastes are generated which currently appear to be, perhaps unnecessarily, subject to the regulations.

The bulk storage of crude oil and even refined petroleum products, such as gasoline, frequently produces a sludge or sediment that periodically must be removed. These sludges and sediments are solid wastes under § 261.2 and frequently may be hazardous wastes either because they are listed (see EPA Hazardous Waste Number K052 in § 261.32) or because they exhibit one or more of the characteristics of hazardous wastes identified in Part 261, Subpart C. The generation of sludges and residues that are hazardous wastes also can occur in the storage of other products and raw materials.

Similarly, sludges and residues are frequently produced in tank trucks, rail tank cars and the tanks or holds of ships and barges that have carried products or raw materials (which are not hazardous wastes). These sludges and residues are periodically removed through washing of the tanks of these transport vehicles and vessels. They are solid wastes and occasionally are hazardous wastes for the same reasons stated above. Where these sludges and residues are hazardous wastes, these vehicles and vessels technically are hazardous waste storage facilities subject to regulation prior to the removal of the hazardous waste.

Other examples occur in a great many manufacturing processes, where hazardous wastes are generated in process units, such as distillation columns, flotation units, and discharge trays of screens and in associated non-waste-treatment process units such as cooling towers. Many of these hazardous wastes are listed in §§ 261.31 and 261.32 (*e.g.*, EPA Hazardous Waste Numbers K009 and K010 in § 261.32). Others are hazardous wastes because they exhibit one or more characteristics of hazardous wastes (*see* 40 CFR Part 261, Subpart C). These hazardous wastes reside in these process units for some period of time—sometimes only minutes, other times for hours or days—and technically cause these units to be hazardous waste storage facilities subject to regulation.

Except for surface impoundments, and non-operating units, EPA did not intend to regulate product and raw material storage tanks, transport vehicles and vessels or manufacturing process units in which hazardous wastes are generated. As represented by the above examples, most of these units are tanks or tank-like units (*e.g.*, distillation units) which are designed and operated to hold valuable products or raw materials in storage or transportation or during manufacturing. Because of their design and operation, these units are capable of holding, and are typically operated to hold, the hazardous wastes which are generated in them, until the wastes are purposefully removed. Thus, these hazardous wastes are contained against release into the environment (except, of course, when abnormal circumstances such as fire or explosion occur) and the risks they pose to human health or the environment are very low and are only incidental to the risks posed by the valuable product or raw material with which they are associated. Based on these conclusions, EPA believes it is not necessary, except as noted below, to require owners and operators of these units to obtain permits for these units or to comply with the requirements of § 262.34 or Parts 264 or 265 with respect to these units.

Except where the unit is a surface impoundment or is not operating, as discussed below, the Agency believes that the hazardous waste generated in such a unit should only be subject to regulation when it is removed from the unit. In most cases, it is only after the removal of hazardous wastes from these units that the wastes have the potential for releasing hazardous constituents into the environment and posing a substantial hazard to human health or the environment.

As one exception to the foregoing, EPA does not believe that surface impoundments in which hazardous wastes are generated should be exempted from the regulations. These units, by definition (see 40 CFR 260.10), are formed in or constructed of earthen materials and often may not be lined with impermeable materials capable of preventing leaching. Any hazardous wastes generated and accumulated or stored in these units will have a much greater potential to leach, leak or otherwise escape from these units into the environment than those hazardous wastes generated and contained in the tanks and tank-like units discussed above. Because of this greater potential for release into the environment, the Agency believes that the hazardous wastes generated in surface impoundments may pose a substantial hazard to human health or the environment and therefore warrant regulation even while they remain in the impoundment. Such regulation will ensure that the impoundment is properly constructed, lined, inspected and operated, and that groundwater monitoring is performed.

As a second exception to the foregoing, EPA does not believe that hazardous wastes generated in manufacturing process units, or product or raw material storage tanks, transport vehicles or vessels should be exempted from regulation when these wastes remain in the units after they have ceased to be operated for the primary purpose of manufacturing or product or raw materials storage or transportation. EPA believes that when operation ceases, the incentive to maintain the integrity of the unit to prevent leaks or other unintended release of products, raw materials or manufacturing intermediates into the environment is substantially reduced. Consequently, the incentive to maintain the unit to prevent leaks or release of hazardous wastes which may remain in the unit after cessation of operation would also be substantially reduced. As stated above, the rationale for exempting hazardous waste from regulation while it remains in the unit in which it was generated is that the unit will have structural integrity against releases and will be operated to prevent such releases. The Agency believes that this rationale does not hold after cessation of operation.

EPA recognizes that manufacturing units and product and raw material storage tanks, transport vehicles and vessels are occasionally taken out of operation for temporary periods that may range from days, to months, and sometimes years, because of temporary declines in business or other business reasons. Units may also be taken out of operation for maintenance or repair. During these temporary shutdowns, hazardous wastes may remain in these units. The Agency also recognizes that these units may be permanently taken out of operation and hazardous wastes may remain in them for some period of time after shutdown. For both temporary and permanent shutdowns, the Agency will allow a reasonable time to remove any hazardous wastes that remain in the unit after operation ceases. Given the presumption that the unit has integrity before cessation of operation, the Agency believes that a reasonable time is 90 days. This time also is consistent with the 90-day accumulation period allowed under § 262.34. If hazardous wastes remain in these units more than 90 days after cessation of operation, EPA believes that these wastes should be fully regulated and that the units should be regulated as hazardous waste storage facilities. Thus, at that point, the owner and operator of the Unit would have to have interim status and comply with the Interim Status Standards of Part 265 or have a permit under Part 122 and comply with permit conditions.

Based on the foregoing assessment, EPA, in this rulemaking action, is amending the regulations by adding an exclusion provision to § 261.4 which

provides that a hazardous waste which is generated in a manufacturing process unit or an associated non-waste treatment unit, or in a product or raw material storage tank, transport vehicle or vessel is not subject to regulation under Parts 262 through 265 or Parts 122 through 124 or the notification requirements of Section 3010 of RCRA until it is removed from the unit in which it is generated, unless the unit is a surface impoundment or unless the hazardous waste remains in the unit for more than 90 days after the unit ceases to be operated for the purpose of manufacturing, or storing or transporting product or raw materials.

II. Definition of Transport Vehicle and Vessel

As indicated in the above discussion, this amendment deals with hazardous wastes that are generated in product or raw material transport vehicles and vessels, as well as those generated in manufacturing units and product or raw material storage tanks. Because the terms "transport vehicle" and "vessel" are not currently defined in § 260.10, definitions of these terms are included in this amendment. These definitions are the same as those in the Department of Transportation regulations governing the transportation of hazardous materials (see 49 CFR 171.8).

III. Generator Responsibilities and Amendment to 40 CFR 260.10

Many members of the regulated community also have asked the question: Who is the generator of hazardous wastes that are generated in manufacturing process units or in product or raw material storage tanks, transport vehicles or vessels? These persons point out that, with respect to stationary product and raw material storage tanks, it is quite common for one person to own and operate the storage tank, a second person to own the product or raw material being stored, and a third person (usually under contract to either the first or second person) to remove and dispose of sludges, sediments and residues that may have been formed in the tank. It also is common for the owner and operator of the tank to also own the stored product or raw material, but to hire another person to remove and dispose of sediments and residues formed in the tanks. There are situations, of course, where the three parties are one person, or where more than three parties are involved.

The same scenarios occur with respect to tank trucks, rail cars, and ships and barges. However, these scenarios are commonly complicated by two additional practices. Oftentimes these transport vehicles or vessels are taken to a central facility for removal of sediment and residues and attendant tank washing or cleaning. Frequently, this central facility is owned or operated by a person other than the owner or operator of the vehicle or vessel and, even more frequently, other than the owner of the product or raw material that produced the sediment or residue. Secondly, the residue or sediment cleaned and removed from a vehicle or vessel may have been produced by two or more products, thus bringing into the picture additional parties—the owners of two or more products. This situation can also occur, but is less common, with stationary storage tanks.

With respect to manufacturing units, the situation typically is not complicated. Usually, the same person owns and operates the unit, owns the manufacturing materials that may generate a hazardous waste and removes any hazardous wastes generated in the unit. However, there are situations where two or more parties are involved. One such situation is where a second party is periodically retained to clean a unit. Another situation is where the hazardous waste is produced by the processing of materials that are owned by two or more persons. This occurs in the reclaiming of spent solvents and spent catalysts where the reclaimer custom-processes batches of spent material without taking ownership of the material.

The definition of "generator" in § 260.10 is "any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 * * *." This definition suggests that the operator of a manufacturing process unit or a product or raw material storage tank, transport vehicle or vessel is a generator of a hazardous waste because it is his "act" of storage or transportation or his "process" of manufacturing that produces the hazardous waste. In the case of storage or transportation, the act of holding the product or raw material enables settling of heavy fractions of material to create hazardous waste sludges or sediments and enables hazardous waste residues to adhere to the tank. In the case of manufacturing processes, the process of manufacturing produces the hazardous wastes.

The owner of the product or raw material being stored or transported and the owner of the materials being manufactured also fit the definition of "generator" of the hazardous waste because their "acts" cause the product or material to be stored, transported or manufactured which leads to the generation of the hazardous wastes. Additionally, it is constituents in their product or material that "produce" a hazardous waste.

The definition of generator, particularly when read in conjunction with the amendment discussed above, also fits the person removing the hazardous waste from a manufacturing process unit or a product or raw material storage tank, transport vehicle or vessel. Although often it is not his "act or process" that produces the hazardous waste, it is his act that causes the hazardous waste to become subject to regulation (except where it is generated in a surface impoundment or remains in a non-operating unit for more than 90 days after cessation of operation).

The definition of generator, depending on the particular factual situation, can include all of the parties discussed above. Both the operator of a manufacturing process unit, or a product or raw material storage tank, transport vehicle or vessel, and the owner of the product or raw material act jointly to produce the hazardous waste generated therein, and the person who removes the hazardous waste from a tank, vehicle, vessel or manufacturing process unit subjects it to regulation. All three parties are involved and EPA believes that all three (and any others who fit the definition of "generator") have the responsibilities of a generator.

Because all three parties contribute to the generation of a hazardous waste and because none of the parties stands out in all cases as the predominant contributor, the Agency has concluded that the three parties should be jointly and severally liable as generators. The Agency will, of course, be satisfied if one of the three parties assumes and performs the duties of the generator on behalf of all of the parties. In fact, the Agency prefers and encourages such action and recommends that, where two or more parties are involved, they should mutually agree to have one party perform the generator duties. Where this is done, the Agency will look to that designated party to perform the generator responsibilities. Nevertheless, EPA reserves the right to enforce against any and all persons who fit the definition of "generator" in a particular case if the requirements of Part 262 are not adequately met, providing such enforcement is equitable and in the public interest.

Given this conclusion, the Agency believes it has an obligation to give guidance to the regulated community on who it prefers to assume the generator

responsibilities and to whom it will initially look to perform the generator duties where more than one party is involved and where EPA does not know which party, by mutual agreement, is appointed to carry out the generator duties, or where no party has been so designated. In the case of hazardous wastes generated in a stationary product or raw material storage tank, EPA will initially look to the operator of the tank to perform the generator responsibilities. EPA believes that this party is in the best position to perform the generator responsibilities. The operator typically is on-site and can determine when a tank contains sludges or residues that may be hazardous wastes. He certainly knows or ought to know when these sludges and residues are being removed and, therefore, when they become subject to regulation, if they are a hazardous waste. Because he is typically on-site, he is in a good position to carry out those duties of a generator which practically must be performed on-site. These include determining whether a hazardous waste exists (§ 262.11), initiating a manifest for off-site shipment (Part 262, Subpart B) and performing the pre-transportation requirements of packaging, labeling and marking (Part 262, Subpart C).

For hazardous wastes generated in a manufacturing process unit, EPA will initially look to the operator of the unit to fulfill the generator duties for the same reasons described above.

For hazardous wastes generated in a product or raw material transport vehicle or vessel which are removed at a central facility which is operated to remove sediments and residues from such vehicles or vessels, the Agency will initially look to the operator of the central facility to perform the generator duties. Following the reasoning outlined above, the Agency believes that the operator of a central facility is the party best able to perform the generator duties. Where hazardous wastes generated in product or raw material transport vehicles or vessels are not removed at a central facility, the Agency will look to the operator of the vehicle or vessel to perform the generator duties.

As discussed above, the person who removes hazardous waste from a manufacturing process unit or a product or raw materials storage tank, transport vehicle or vessel will be jointly and severally liable, along with the owner and operator of the tank, vehicle, vessel or unit and the owner of the product or raw material, as a generator. To clarify that such persons are included in the definition of generator, the Agency, in this rulemaking action, is amending the definition of "generator" in § 260.10 by adding a final clause so that the definition reads "* * * any person, by site, whose act or process produces a hazardous waste identified or listed in Part 261 of this Chapter or whose act first causes a hazardous waste to become subject to regulation."

IV. Accumulation of Hazardous Wastes

A number of questions have been asked about whether the hazardous wastes removed from product or raw material storage tanks, transport vehicles or vessels or manufacturing process units can be accumulated on-site without a permit for up to 90 days after removal and prior to off-site transport in accordance with § 262.34. Because today's amendment to §261.4 subjects such hazardous wastes to regulation only after they are removed from such tanks, vehicles, vessels or units and because there often will be a need to accumulate the removed wastes until a sufficient quantity can be obtained for off-site transport, the Agency believes that the 90-day accumulation provisions of §262.34 should be available to the generators of these hazardous wastes, except where these wastes are generated in a surface impoundment or the wastes remain in the unit more than 90 days following cessation of operation of the unit.

This allowance of 90-day accumulation without a permit is available to any of the persons who are generators, even though the party accumulating the waste on-site may not own or operate the site. This allowance only applies where the accumulation occurs on the site where the removal of hazardous waste from the tank, vehicle, vessel or unit takes place; all of the other conditions and requirements of § 262.34 must, of course, be met. The 90-day accumulation period starts when the hazardous waste is removed from the tank, vehicle, vessel or unit, except in the case where a tank, vehicle, vessel or unit ceases to be operated for its primary purpose, in which case the period starts when operation ceases.

V. Notification and EPA Identification Number Requirements

A number of questions have been asked about how the notification requirements of Section 3010 of RCRA and the EPA Identification Number requirements of §262.12 apply to generators of hazardous wastes generated in manufacturing process units or product or raw material storage tanks, transport vehicles or vessels. Today's amendment to §261.4 provides that such wastes (not including those generated in surface impoundments or retained for more than 90 days in non-operating units) are not subject to regulation, including section 3010 notification, until they exit the units in which they are generated. Thus, only those wastes that are removed during a future notification period are subject to notification.

Section 262.12, though, requires that a generator must not treat, store, dispose of, transport or offer for transportation a hazardous waste without having an EPA Identification Number. Section 260.10 defines a "generator" to be a person "by site" who generates wastes. Therefore a generator must have a separate EPA Identification Number for each site at which he generates hazardous wastes. Where two or more persons are generators, as discussed above, the person who performs the duties of a generator must have and use an EPA Identification Number for the site at which hazardous wastes are removed from a tank, vehicle, vessel or unit. Thus, if the operator of the tank, vehicle, vessel or unit performs the generator duties, he must have an EPA Identification Number for the facility and can use that number with respect to the management of all of his hazardous waste generated at that facility. If the owner of the product or raw material performs the duties of the generator, he must have and use an EPA Identification Number for the site at which the hazardous waste is generated; if he owns products being stored or processed at several sites, he must have and use a separate EPA Identification Number for each site. If the person who removes hazardous wastes from tanks or units performs the generator duties, he must have a separate EPA Identification Number for each site at which he performs these duties.

VI. Effective Date

Section 3010(b) of RCRA provides that EPA's hazardous waste regulations and revisions thereto take effect six months after their promulgation. The purpose of this requirement is to allow persons handling hazardous wastes sufficient lead time to prepare to comply with major new regulatory requirements. For the amendment to § 261.4 promulgated today, however, the Agency believes, that an effective date six months after promulgation would cause substantial and unnecessary disruption in the implementation of the regulations and would be counterproductive for the regulated community and the public. The regulatory provisions that these amendments modify take effect on November 19, 1980. In the absence of the effectuation of these amendments,

operators of a large number of product and raw material storage tanks, transport vehicles and vessels, and manufacturing process units in which hazardous wastes are generated would have to prepare to operate these facilities as hazardous waste storage facilities on and after November 19, 1980. This would involve preparation and submission of a Part A permit application, preparation of a contingency plan and implementation of a number of administrative and operational practices required by Part 265 for hazardous waste storage facilities. The Agency believes it makes little sense to allow these requirements promulgated on May 19 to become effective on November 19, 1980, and then have them substantially modified on a subsequent date, i.e., the six-month effective date for these amendments.

The amendment to § 261.4 in effect suspends regulation of certain facilities by clarifying when certain hazardous wastes are first subject to the hazardous waste regulations. This lessening of regulatory requirements surely is not the type of revision to regulations that Congress had in mind when it provided a six-month delay between the promulgation and the effective date of revisions to regulations. Consequently, the Agency is setting an effective date of November 19, 1980, for the amendment to § 261.4 promulgated in this rulemaking action.

The definitions of "transport vehicle" and "vessel" are necessary for an understanding of the amendment to § 261.4 and consequently they too have an effective date of November 19, 1980.

EPA is making the amendment to the definition of "generator" effective six months after promulgation, as provided in Section 3010(b) of RCRA. Although many persons who remove hazardous wastes from manufacturing units or from product or raw material storage tanks, vehicles or vessels, recognized that in certain situations they fell within the May 19, 1980, definition of generators, the amendment to the definition will probably make some additional persons generators. These people undoubtedly deserve the six month lead time that Congress provided in Section 3010(b). All persons who fit the May 19 definition of "generator" must comply with all applicable generator requirements on November 19, 1980. Only those persons who are made generators by today's amendment to the definition have an additional six months before they must comply with Part 262 requirements.

VII. Regulatory Impacts

The effect of these amendments is to reduce the overall costs, economic impact and reporting and recordkeeping impacts of EPA's hazardous waste management regulations. This is achieved by removing from regulation as storage facilities product and raw materials storage tanks, transport vehicles and vessels, and manufacturing process units that generate hazardous waste. The Agency is unable to estimate these cost and impact reductions because it does not have an estimate of the number of such tanks and units that otherwise would be regulated. For the reasons already discussed, notwithstanding these cost and impact reductions, the Agency believes that human health and environmental protection will not be reduced by this action.

VIII. Request for Comments

The Agency invites comments on all aspects of these amendments and on all of the issues discussed in this preamble, including the interpretation of "generator," the allowance of 90-day accumulation to all generators, and the notification and EPA Identification Number requirements. EPA is providing a 60-day comment period.

The Agency also invites comments on whether the amendment should also apply to hazardous wastes generated in product or raw material containers other than transportation vehicles and vessels (see § 260.10 for definition of the term "containers"). The Agency has not applied this amendment to such hazardous wastes because it is not aware that significant amounts of hazardous wastes are generated in product or raw material containers (exclusive of transportation vehicles or vessels).

The Agency recognizes that a wide variety of situations exist in the real world, and it is anxious to make its regulations and regulatory interpretations reasonable, understandable, and capable of implementation. The Agency can only do this by learning of situations where the regulations do not work well.

Dated: October 24, 1980.

Douglas M. Costle,

Administrator.

Title 40 of the Code of Federal Regulations is amended as follows:

1. Add the following paragraph (c) to § 261.4:

§ 261.4 Exclusions.

* * * * *

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, or in a manufacturing process unit or an associated non-waste-treatment manufacturing unit, is not subject to regulation under Parts 262 through 265 and Parts 122 through 124 of this chapter or to the notification requirements of Section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation or product or raw materials.

§ 260.10 [Amended]

2. Amend the definition of "Generator" in § 260.10 to read as follows:

* * * * *

Generator means 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.

* * * * *

3. Add the following definitions to § 260.10:

* * * * *

"Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle. "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

[FR Doc. 80-33866 Filed 10-29-80; 8:45 am]
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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SW FRL 1639-1a]

Hazardous Waste Management System: Identification and Listing of Hazardous Wastes

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: Pursuant to Section 3001 of the Resource Conservation and Recovery Act of 1976, as amended (RCRA), the Environmental Protection Agency is proposing to amend the characteristic of Extraction Procedure (EP) toxicity (40 CFR 261.24, 45 FR 33122) to apply to hexavalent chromium instead of total chromium. The effect of amending the EP toxicity characteristic will be to narrow the scope of the EP characteristic, making it applicable to a more limited category of chromium-containing wastes. These wastes will then be subject to the management standards issued by EPA under Sections 3002 through 3006 and 3010 of RCRA (Parts 262 through 265, 122 through 124 of this Chapter and 45 FR 12746). As part of this proposal, the Agency is proposing a new analytical method for use in analyzing waste extracts for the presence of hexavalent chromium.

DATES: EPA will accept public comments on the proposed amendment until December 30, 1980. Any person may request a hearing on this proposal by filing a request with John P. Lehman, whose address appears below, by November 20, 1980. The request must contain the information prescribed in § 260.20(d) of this chapter.

ADDRESSES: Comments should be addressed to Docket Clerk, Office of Solid Waste [WH-562], U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Requests for hearing should be addressed to John P. Lehman, Director, Hazardous and Industrial Waste Division, Office of Solid Waste [WH-565], U.S. Environmental Protection Agency, Washington, D.C. 20460. Communications should identify the regulatory docket number "Section 3001 chromium standard."

The public docket for this proposed rulemaking is located in Room 2711, U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460 and is available for viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: Matthew A. Straus, Office of Solid Waste [WH-565], U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460, (202) 755-9187.

SUPPLEMENTARY INFORMATION: The Environmental Protection Agency is proposing today to amend the characteristic of EP toxicity (40 CFR 261.24, 45 FR 33122) to apply to hexavalent chromium instead of total chromium. This preamble describes the reasons for this proposed amendment, the precise standard being proposed, and a proposed new analytical method for distinguishing between tri- and hexavalent chromium.

I. Basis For a Distinction in the Hazardous Waste Management Regulations Between The Different Valence States of Chromium

On May 19 and July 16, 1980, EPA published its initial regulations implementing Section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended (see 45 FR 33084 and 47832). These regulations define the scope of a comprehensive Federal and State program to effectively control the management of hazardous wastes.

Under these regulations, a solid waste becomes subject to the hazardous waste management system in either of two ways: the specific waste is listed in Part 261 Subpart D (45 FR 33122-33124), or exhibits any of the characteristics of hazardous waste identified in Subpart C (45 FR 33121-122). The criteria for listing hazardous wastes and the characteristic of EP toxicity are based upon the total chromium present in the waste and in the waste extract respectively, without differentiating the *type* of chromium present. These regulations thus specify "chromium and compounds, N.O.S." as hazardous constituents for purposes of listing hazardous wastes (*see* Appendix VIII to Part 261, 45 FR at 33132), and specify a maximum concentration level for "chromium" when identifying wastes by means of the EP toxicity characteristic. (*See* § 261.24, 45 FR at 33122.) A number of wastes listed in the May and July regulations contain chromium as a constituent of concern (specifically EPA Hazardous Waste Nos. F006, K002-006, K048-051, K053-058, K061-063, K069, K074, K078-082, K086, and K090-092). Additional wastes are expected to be identified as hazardous because they fail the EP toxicity characteristic for chromium.

Chromium, however, occurs in a number of valence states, of which the trivalent (Cr (III)) and the hexavalent (Cr (VI)) are environmentally significant.[1] The Agency has received many comments arguing that trivalent chromium is sharply distinguishable from hexavalent chrome in its potential to cause significant human health and environmental harm under normally-occurring solid waste management conditions. These commenters' ultimate point is that solid wastes containing exclusively, or virtually exclusively, trivalent chromium are not hazardous due to chromium concentrations, and should not be regulated as if they contain hexavalent chromium.

The Agency has reviewed these comments carefully, and has conducted its own investigation of this question in promulgating the regulations and in response to the comments. We believe that the toxicity and environmental fate of trivalent chromium merits further study, and we intend to investigate these questions further. It is our conclusion, however, that at the present time the hazardous waste management regulations should be amended to reflect a distinction between trivalent and hexavalent chromium. The principal points of distinction between the two types of chromium which we believe justify this regulatory amendment are the differing toxicities and the differing potentials for migration and mobility of chromium (III) and chromium (VI), and the apparent low likelihood that trivalent chromium will oxidize to hexavalent chromium under most plausibly-occurring types of improper waste management. These distinctions are discussed in more detail below.

A. Distinctions in the Environmental Hazards Posed by Trivalent and Hexavalent Chromium

It is generally agreed among the scientific community that the available data show that trivalent chromium is less toxic than the hexavalent form. The carcinogenicity of various hexavalent chromium compounds in human and animal models has been well documented (NAS, 1974; NIOSH, 1975; U.S. EPA, 1978). EPA's Carcinogen Assessment Group (CAG) has determined that there is substantial evidence that hexavalent chromium compounds are carcinogenic in man. Data on the carcinogenicity of trivalent chromium are inadequate. There have been no epidemiological studies on workers using trivalent chromium compounds; rats showed a weak carcinogenic response to chromium (III)

[1] Chromium valence states of -2 to +6 have been reported, but most of these are too unstable to be of significance in biological and environmental processes. *See generally*, U.S. EPA, *Water-Related Environmental Fate of 129 Priority Pollutants*, Vol. I, EPA-440/4-79-029a (1979).

acetate. (Hueper and Payne, 1962; Maltoni, 1974).

It is further agreed that only hexavalent chromium presently is known to pose a serious threat of mutagenicity. Chromuim compounds induce chromosomal abberrations in human and animal leukocytes, and mutations in bacteria and yeasts (EPA, 1978; Petrilli and deFlora, 1977, 1978; Nakumoro, 1978). In these studies, trivalent chromium compounds have a weak response, while hexavalent compounds show significantly higher activity.

Acute and chronic toxicity problems associated with exposure to hexavalent chromium include penetrating skin ulcers, perforation of the nasal septum, inflammation of the larynx, as well as damage to kidneys and lungs. (Casarett and Doull, 1979; NAS, 1974; NIOSH, 1975; Bovett et al., 1977.) These effects do not occur upon exposure to chromium (III). The only well-documented adverse consequence of exposure to trivalent chrome is allergic dermatitis (also a property of Hexavalent chromium compounds) (Casarett and Doull, 1979)[2]

Various direct applications of trivalent chromium to humans are actually considered to be desirable. Trivalent chromium is required for proper metabolic functioning. It serves as a cofactor for the action of insulin, and is necessary for normal glucose utilization (Toepfer, et al., 1977). The Food and Drug Administration also has approved the use of trivalent chromium-containing pigments in cosmetics. (21 CFR 73.2326 and 73.2327.) No such applications of hexavalent chrome have been approved, nor are they considered to be beneficial.

Thus, at the present time, there are well-recognized distinctions between the human health and environmental hazards posed by tri- and hexavalent chromium.

B. Migratory Potentials of Trivalent and Hexavalent Chromium

Trivalent chromium appears to have significantly lower migratory potential than hexavalent chromium, and to have significantly less mobility should it migrate from a waste matrix. Most trivalent chromium salts are virtually insoluble. Trivalent chromium, moreover, is strongly adsorbed by clays and by organic soil materials (U.S. EPA, 1978, Bartlett, 1976; and Griffin, 1979), decreasing the possibility of exposure via a groundwater exposure pathway even if migration occurs. In contrast, hexavalent chromium salts are very soluble and therefore have high migratory potential.

Groundwater and leachate monitoring data submitted by various leather tanners appear to confirm the relative immobility of trivalent chromium under normally-occurring waste disposal conditions. (*See, e.g.*, Comments of Tanners' Council of America, August 18, 1980, pp. 7–13; Comments of Dr. Robert M. Lollar, Technical Director of Tanners' Council, August 12, 1980, pp. 6–7.) In addition, the Agency has obtained groundwater and leachate monitoring data from sites accepting large quantities of tannery waste (which wastes contain high concentrations of trivalent chrome), in some cases for long periods of time (from 20 to 86 years). These sites show no evidence of chromium contamination of groundwater. (Comments of Berwick Sewer District, June 30, 1980; Comments of Irving Tanning Co., July 15, 1980.) Groundwater contamination did not occur even in cases of prolonged worst-case management of trivalent chromium-containing wastes (*see* Comments of Wolverine World Wide, Inc., August 15, 1980, Attachment 1, pp. 2, 9–13 (improperly sited landfill with high water table and permeable soil co-disposing tannery wastes with other industrial wastes without any particular precautions still does not show evidence of trivalent chromium groundwater contamination)).

C. Potential of Trivalent Chromium to Oxidize to Hexavalent Chromium

In developing the present regulatory regime based upon total chromium, the Agency was aware of the differing potentials for hazard of tri- and hexavent chromium, and also of their differing migratory potentials. Our concern was that trivalent chromium, under waste management conditions, could oxidize to the hexavalent form, which would render it highly mobile and toxic. (*See, e.g.*, U.S. EPA, Listing Background Document for Leather Tanning and Finishing Industry, pp. 733–34, May 2, 1980.) Further analysis indicates, however, that such oxidation is not likely to occur under most waste management practices. Although the oxidation of trivalent chromium can occur on a theoretical basis (Carlin, 1965; U.S. EPA, 1977), oxidation is unlikely to occur in normal land disposal situations. Thus, oxidation does not take place except under alkaline and aerobic conditions (Robertson, 1975). Even then, the rate of oxidation is very slow unless manganese dioxide is present (Schroeder and Lee, 1975). These conditions are not ordinarily found in landfill or impoundment disposal situations, since these are typically anaerobic environments. (Ham, 1979.) Monitoring data submitted in comments likewise supports the conclusion that oxidation of trivalent chromium is unlikely when these wastes are land disposed. (*See* Comments of Alley, Young & Baumgartner, Inc., July 11, 1980; Comments of Salz Leathers, Inc., July 14, 1980, exh. B.)[3]

Given the relatively low toxicity of trivalent chromium, its low migratory potential, and the lack of indication of potential for oxidation under usual land disposal conditions, the Agency does not believe that land disposal of trivalent chromium-containing wastes in common landfill or impoundment situations poses a present or potential hazard to human health or the environment via soil migration to groundwater. We therefore believe it necessary to recognize a distinction between tri- and hexavalent chromium-containing wastes when land disposed.

Our research indicates, however, that trivalent chromium oxidizes to the hexavalent form when materials containing chromium (III) are incinerated or similarly treated by a destructive oxidation process. The incineration ash will certainly be contaminated with chromium (VI) (Comments of Tanners' Council of America, *supra*, p. 6), and we expect that hexavalent chromium will be present in incinerator emissions as well (U.S. Dept. of the Interior, 1979). As a result, we believe that chromium-bearing wastes (*i.e.*, wastes containing both valence types) continue to require Subtitle C regulation when managed by incineration or similar processes. Our contemplated regulatory approach for these wastes is described in Part II. C below.

D. Impact of the Proposed Distinction On Other Regulatory Programs

We note, at this point, that certain other of the Agency's regulatory programs regulate on the basis of total chromium. Our porposed action involves only the hazardous waste management program, and is based on a perceived distinction in the substantiality of hazard posed by tri- and hexavalent chromium-containing wastes when disposed on land.

Different considerations underly the Agency's other programs. For example,

[2] Various aquatic species likewise are more susceptible to the hexavalent form of chromium.

[3] Ultraviolet light-sensitized oxidation of trivalent chromium has been demonstrated under laboratory conditions (Stephens, 1977). This oxidation did not take place, however, when lake water was tested. In any case, we do not believe that these experimental conditions reflect those normally occurring in a waste disposal environment.

the National Interim Primary Drinking Water standards are for total chromium. This is because pre-treatment of drinking water by chlorination may result in oxidation of trivalent chromium. (Guidelines for Canadian Water Quality, 1978; Sorg, 1979; U.S. EPA, 1976.) Total chromium is thus the appropriate parameter. (U.S. EPA, 1976.)

All chromium compounds also are regulated as toxic under the Clean Water Act (CWA). In part, this reflects the Congressional determination to list all chromium compounds as toxic pollutants under CWA Section 307(a)(1). In addition, the Administrator has a great deal of flexibility in making listing (or delisting) determinations under CWA Section 307. He is to consider a series of enumerated factors, to assign appropriate weight to each, and to arrive at a final determination by balancing the different elements. The identification process under RCRA is much less flexible and is to some extent more stringent, in light of the significantly more impactive consequences of a RCRA hazardous waste determination. Thus, wastes are not to be identified as hazardous unless they are capable of posing a "substantial" hazard to human health or the environment. In light of these differing statutory schemes, regulatory action affecting chromium-containing wastes has no direct bearing on the status of chromium as a toxic pollutant under CWA Section 307(a).

II. Regulatory Action

A. Proposal To Amend the Characteristic of EP Toxicity

In order to reflect the differing environmental hazards posed by trivalent and hexavalent chromium-containing wastes when disposed on land, the Agency is proposing to amend the extraction procedure to apply to hexavalent chrome instead of to total chromium. We are not, however, proposing to change the maximum concentration level of hexavalent chromium in the EP extract, which would consequently remain at 5.0 mg/l. This level is based on the National Interim Primary Drinking Water Standard, which was established to reflect the known toxicity of the hexavalent form.[4] (Sorg, 1979; U.S. EPA, 1976.)[5] Other countries and organizations also have adopted this level for chromium in drinking water, and have indicated explicitly that the standard is for hexavalent chromium. (WHO, 1970; NAS, 1977; Sorg, 1979 (describing Japan's drinking water standard for hexavalent chromium).) Since the underlying drinking water standard in fact reflects human health and environmental dangers of hexavalent chromium, we feel justified in retaining this standard when regulating solely on the basis of hexavalent chrome.

We stress that under our proposal, all wastes are to be tested for the characteristic of EP toxicity based on hexavalent chromium when the amended characteristic is finalized. We wish particularly to clarify this point because of other regulatory action taken today delisting certain chromium-bearing wastes and granting temporary exclusions from hazardous waste status for other such wastes (published elsewhere in Part XI of this issue).

All of these wastes will be subject to the amended EP toxicity characteristic and generators of these wastes consequently will have to test their waste extracts for the presence of hexavalent chromium.

B. Proposed Analytical Method Distinguishing Between Tri- and Hexavalent Chromium

The proposal to amend the EP toxicity characteristic to apply only to hexavalent chromium requires that there be an analytical method which distinguishes between these two valence states. EPA's Office of Research and Development has developed such a procedure. The method (fully described in Appendix A to this preamble) is based on the separation of hexavalent chromium from solution by the coprecipitation of lead chromate with lead sulfate at a pH of 3.5. The precipitate is resolubilized in nitric acid and quantified by atomic absorption spectroscopy. Since trivalent chromium does not precipitate under such conditions, the method offers a means of determining the presence and concentration of the hexavalent state in admixture with the trivalent form. Comments are solicited on the application of this method to EP extracts.

This method has been evaluated using effluents containing high concentrations of organic material, samples where matrix interferences have been encountered with the more usual chelation/extraction procedures. Further evaluation presently is being conducted with a wide variety of industrial wastes and EP extracts. The procedure will be finally promulgated after review of comments and after an adequate supportive data base is available.

C. Incineration of Chromium-Containing Wastes

The Agency contemplates regulating wastes which contain both tri- and hexavalent chromium in one circumstance,[6] namely when a chromium-bearing waste is incinerated or destructively oxidized by a similar process. Such control is necessary because trivalent chromium oxidizes to hexavalent chromium during incineration. (U.S. Dept. of Interior, 1979). Incinerated wastes containing trivalent chromium thus should be regulated as if they contain hexavalent chromium. The Agency intends in the near future to adopt appropriate regulations under Parts 261 and 266 regulating these types of chromium-bearing wastes. Regulatory action is being deferred at the present time, however, due to the need to implement other parts of the hazardous waste management program, and also because incineration of trivalent chromium-containing wastes does not appear to be widespread,[7] limiting the possibility of environmental insult during this interim period. Furthermore, the Agency needs more time to develop regulatory standards to apply to facilities incinerating trivalent chromium-containing wastes. For these reasons, we are not proposing any standards for incineration of trivalent chromium-containing wastes at this time.

EPA is, however, anxious to obtain comments on this contemplated approach. We specifically solicit comments to the following questions:

1. When incineration of chromium-containing wastes causes oxidation of

[4] The maximum concentration level of the EP toxicity characteristic, of course, is established at two orders of magnitude above the Drinking Water Standard.

[5] As noted above, the standard also establishes a margin of safety in light of oxidation of chromium as a result of drinking water treatment (Sorg, 1979).

[6] There also is one other situation where wastes might be regulated based on total chromium. The Agency still has some concern that trivalent chromium from waste disposal sites could migrate to public water systems where it would be oxidized during chlorination to the hexavalent state. We believe the likelihood of this occurring to be remote in light of the low migratory potential of trivalent chromium. However, should migration of trivalent chromium from improper waste disposal occur in concentrations sufficient to interfere substantially with treatment of public water systems, or otherwise cause public health concerns, we view our imminent hazard authority under Section 7003 of RCRA as sufficient to enjoin further contamination. We are also prepared in this circumstance to exercise our listing authority under Subtitle C to address the particular site creating the problem.

[7] For example, the tanning industry, a principal generator of trivalent chromium-bearing wastes, does not presently incinerate any of its wastes, although a few individual tanneries and the Tanners' Council in collaboration with the U.S. Bureau of Mines are investigating the feasibility of waste incineration. (U.S. Dept. of Interior, 1979.) Several POTW's do, however, use the Zimpro process to incinerate tannery sludges.

trivalent chromium to hexavalent chromium, will this oxidized hexavalent chromium be emitted to the air as a result of incineration or will it remain in the incinerator ash? How effective are available stack scrubbing devices in removing any chromium from the off-gases?

2. If chromium-bearing wastes are to be regulated as hazardous when incinerated or when subjected to similar destructive oxidation processes, what concentration of chromium should be present in the waste to trigger regulatory controls? What is the correlation between concentrations of total chromium in a waste, and concentrations of hexavalent chromium in incinerator emissions? Do conditions of incineration or pyrolysis affect this ratio?

3. What management standards should be applied to facilities incinerating chromimum-bearing wastes during the interim status period? Are subparts A, B, C, D, E, G, H, and O of the Part 265 interim status standards appropriate?

Dated: October 27, 1980.

Douglas M. Costle,

Administrator.

It is proposed to amend Title 40 CFR Part 261 as follows:

§ 261.24 [Amended]

1. In § 261.24, *Characteristic of EP Toxicity,* amend by revising the entry for EPA Hazardous Waste Number D007 Table 1 as follows:

EPA hazardous waste number	Contaminant	Maximum concentration (milligrams per liter)
D007	Chromium (VI)	5.0

2. In Appendix II to Part 261 EP Toxicity Test Procedure, revise *Analytical Procedures for analyzing Extract Contaminants* as follows: [1]

Analytical Procedures For Analyzing Extract Contaminants

The test methods for analyzing the extract are as follows:

(1) For arsenic, barium, cadmium, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2, 4-D [2, 4-dichlorophenoxyacetic acid], or 2, 4, 5-TP [2, 4, 5-trichlorophenoxypropionic acid]: "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods." Solid Wate Information, U.S. Environmental Protection Agency, 26 W St. Clair Street, Cincinnati, Ohio 45268 [SW–846, 1980].

(2) For chromium (VI): Method 8.545 in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods." Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair Street, Cincinnati, Ohio 45268.

Appendix A—Method of Analysis for Hexavalent Chromium

Method 8.545 Hexavalent Chromium by Coprecipitation With Lead Sulfate

1. Scope and Application

1.1 This method covers the determination of dissolved hexavalent chromium Cr(VI) in Extraction Procedure EP] extracts.

1.2 The method may be used to analyze samples containing more than 5 μg of Cr(VI) per liter. In many cases, dilution of the extract will be necessary to achieve an optimal concentration range for Furnace Atomic Absorption spectrometry. The dilution of the sample extract is desirable since it will reduce the likelihood of interferences from sulfate and chloride ions (see 4.1) which are present in many extracts and to increase the reproducibility of the method.

2. Summary of the Method

2.1 The method is based on the separation of Cr(VI) from solution by coprecipitation of lead chromate with lead sulfate to a solution of acetic acid. After separation the supernate (containing Cr(III)) is drawn off, the precipitate is resolubilized in nitric acid as trivalent chromium Cr(III) and quantified by furnace atomic absorption spectrometry.

3. Sample Handling and Preservation

3.1 For guidance on sample handling and glassware cleaning procedures see Section 8.49.

3.2 The sample to be evaluated for the Extraction Procedure characteristic should not be acidified, but instead transported and stored at 4°C until analysis.

3.3 Since stability of Cr(VI) is not completely understood at this time, the analysis should be carried out as soon as possible.

4. Interferences

4.1 Samples containing either sulfate or chloride in concentrations above 1000 mg/liter should be diluted before proceeding to step 9.1.

5. Instrument Parameters (Furnance Atomic Absorption Spectrometry)

5.1 Drying Time and Temperature: 30 sec at 125°C.

5.2 Ashing Time and Temperature: 30 sec at 1000°C.

5.3 Atomizing Time and Temperature: 10 sec at 2700°C.

5.4 Purge Gas Atmosphere: Argon

5.5 Wavelength: 357.9 nm

5.6 Other operating parameters should be set as specified by the particular instrument manufacturer.

6. Special Apparatus

6.1 Glassware

6.1.1 Filtering flask, heavy wall, 1 liter capacity

6.1.2 Centrifuge tubes, heavy duty, conical, graduated, glass stoppered, 10 ml capacity

6.1.3 Pasteur pipets, borosilicate glass, 6.8 cm

6.2 Centrifuge: any centrifuge capable of reaching 2000 rpm and accepting the centrifuge tubes described in 6.1.2. may be used.

6.3 pH Meter: a wide variety of instruments are commerically available and suitable for this work.

6.4 Test Tube Mixer: any mixer capable of thorough vortex is acceptable.

7. Reagents

7.1 Lead Nitrate Solution: Dissolve 33.1 grams of lead nitrate, $Pb(NO_3)_2$ (analytical reagent grade), in deionized distilled water and dilute to 100 ml.

7.2 Ammonium Sulfate Solution: Dissolve 2.7 grams of ammonium sulfate, $(NH_4)_2SO_4$ (analytical reagent grade) in deionized distilled water and dilute to 100 ml.

7.3. Calcium Nitrate Solution: Dissolve 11.8 grams of calcium nitrate, $Ca(NO_3)_2 \cdot 4H_2O$ (analytical reagent grade) in deionized distilled water and dilute to 100 ml. 1 ml = 20 mg Ca.

7.4 Nitric Acid, Concentrated, distilled reagent grade or spectrograde quality.

7.5 Acetic Acid, Glacial: ACS reagent grade 7.5.1 Acetic Acid, 10% (v/v): Dilute 10 ml glacial acetic acid to 100 ml with deionized distilled water.

7.6 Ammonium Hydroxide, 10% (v/v): Dilute 10 ml concentrated ammonium hydroxide, NH_4OH (analytical reagent grade), to 100 ml with deionized distilled water.

7.7 Hydrogen Peroxide, 30%: ACS reagent grade.

7.8 Potassium Dichromate Standard Solution: Dissolve 2.8285 grams of dried potassium dichromate, $K_2Cr_2O_7$ (analytical reagent grade), in deionized distilled water and dilute to 1 liter. 1 ml = 1 mg Cr [1000 mg/l).

7.9 Trivalent Chromium Working Stock Solution: To 50 ml of the potassium dichromate standard solution (7.8) add 1 ml of 30% H_2O_2 (7.7) and 1 ml concentrated HNO_3 (7.4) and dilute to 100 ml with deionized distilled water. 1 ml = 0.5 mg Cr(III). Prepare fresh monthly or as needed.

8. Calibration

8.1 At the time of anlaysis, prepare a blank and a series of at least four calibration standards from the Cr(III) working stock (7.9) that will adequately bracket the sample and cover a concentration range of 5 to 100 ug Cr/1. Add to the blank and each standard, before diluting to final volume, 1 ml 30% H_2O_2 (7.7), 5 ml concentrated HNO_3 (7.4), and 1 ml calcium nitrate solution (7.3) for each 100 ml of prepared solution. These calibration standards should be prepared fresh weekly, or as needed.

8.2 The listed instrument condition (5) and calibration concentration range are for a Perkin-Elmer HGA-2100 based on the use of a 20 ul injection, continuous flow purge gas and non-pyrolytic graphite. The use of simultaneous background correction is required for both calibration and sample analysis.

9. Procedure

9.1 Transfer a 50 ml portion of the filtered sample to a 100 ml Griffin beaker and adjust to a pH of 3.5 ± 0.3 by adding dropwise volumes of 10% acetic acid. Note: Care must

[1] Note: See FR Doc. 80-33671 published at the end of this Part IX of the Federal Register.

be exercised not to take the pH below 3. If the pH is inadvertently lowered to <3, 10% NH_4OH (7.6) should be used to readjust the pH to 3.5 ±0.3.

9.2 Pipet a 10 ml aliquot of the adjusted sample into a centrifuge tube (6.1.2). Add 100 ul of the lead nitrate solution (7.1), stopper the tube, mix the sample and allow to stand for 3 minutes.

9.3 After the formation of lead chromate, to help retain Cr(III) complex in solution, add 0.5 ml glacial acetic acid (7.5), stopper and mix.

9.4 To provide adequate lead sulfate for coprecipitation add 100 ul of ammonium sulfate solution (7.2), stopper and mix.

9.5 Place the stoppered centrifuge tube in the centrifuge, making sure that the tube is properly counterbalanced. Start the centrifuge and slowly increase the speed to 2000 rpm in small increments over a period of 5 minutes.

Note.—The speed of the centrifuge must be increased slowly to insure complete coprecipitation.

9.6 After centrifuging remove the tube and withdraw and discard the supernate using the apparatus detailed in Figure 1. As the pasteur pipet is lowered into the tube the supernate is sucked over into the filtering flask. With care the supernate can be withdrawn to within approximately 0.1 ml above the precipitate.

9.7 To the remaining precipitate add 0.5 ml concentrated HNO_3 (7.4), 100µl 30% H_2O_2 (7.7) and 100µl calcium nitrate solution (7.3). Stopper the tube and mix using a vortex mixer to disrupt the precipitate and solubilize the lead chromate. Dilute to 10ml, mix and analyze in the same manner as the calibration standard (8.2).

10. Verification

10.1 For every sample matrix analyzed verification is necessary to determine that neither a reducing condition nor chemical interference affecting precipitation is present. This must be accomplished by analyzing a second 10 ml aliquot of the pH-adjusted filtrate that has been spiked with Cr(VI) (7.7). The amount of spike added should double the concentration found in the original aliquot. Under no circumstance should the increase be of less than 30µg Cr(VI)/1. To verify the absence of an interference the spike recovery should be between 85% and 115%.

10.2 If the addition of the spike extends the concentration beyond the calibration curve the analysis solution should be diluted with blank solution, and the calculated results adjusted accordingly.

10.3 If the result of verification indicates a suppressive interference, the sample should be diluted and reanalyzed.

11. Analytical Notes

11.1 Nitrogen should not be used as a purge gas because of possible CN band interference.

11.2 The use of pyrolytic graphite should be avoided when possible, since in some situations an enhancement effect has been reported.

11.3 Pipet tips have been reported to be a possible source of contamination.

11.4 The method of standard addition should be used in accordance with the general methods given in the manual "Test Methods for Evaluating Solid Waste," SW-846.

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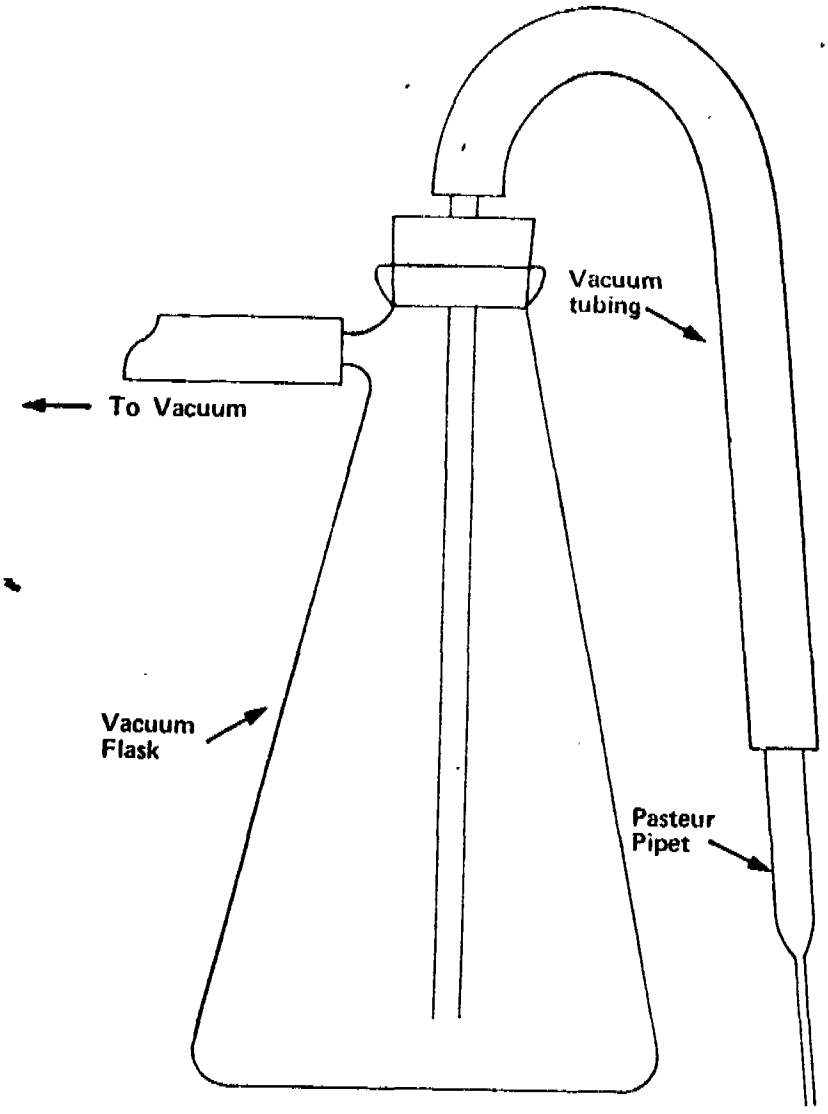

FIGURE 1

[FR Doc. 80-33807 Filed 10-29-80; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SW FRL 1639-1b]

Hazardous Waste Management System: Identification and Listing of Hazardous Wastes

AGENCY: Environmental Protection Agency.

ACTION: Interim Final Rule and Request for Comments.

SUMMARY: This rule amends § 261.4 of the Resource Conservation and Recovery Act (RCRA) hazardous waste management regulations by temporarily excluding from hazardous waste status wastes which presently are deemed hazardous solely due to the presence of chromium, but contain trivalent chromium exclusively (or nearly exclusively), are generated from processes which use trivalent chromium exclusively (or nearly exclusively), and are typically and frequently managed in non-oxidizing environments. Specific wastes excluded under this standard are tannery wastes listed as hazardous in § 261.32 (EPA Hazardous Waste Nos. K053 to K058); waste leather scrap from the leather tanning industry, the shoe manufacturing industry and other leather product manufacturing industries; and wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process listed as hazardous in § 261.32 (EPA Hazardous Waste No. K074).

Other wastes also may be temporarily excluded if they meet the standard set out above. To be eligible for a temporary exclusion, a waste generator or group of generators must petition the Agency to grant their waste a temporary exclusion and show why their waste meets the temporary exclusive standard. Petitions will be processed under the procedures set forth in § 260.20 of the hazardous waste regulations. Generators of wastes already determined to be within the temporary exclusion need not file petitions

This amendment is taken in conjunction with two other regulatory actions. The first is a proposal to amend the characteristic of EP toxicity to apply only to hexavalent chromium. These temporary exclusions will remain in effect only until that proposed amendment is acted upon finally. The second regulatory action is a final delisting of certain chromium-bearing waste streams. The temporary exclusion provision is necessary to allow these delistings to have their intended effect, and therefore is being adopted as an interim final regulation.

DATES: Effective Date: This amendment, in the form published today, is interim final Agency action. It becomes effective on November 19, 1980.

EPA will accept public comments on this interim final regulation until December 30, 1980. Any person may request a hearing on this interim final rule by filing a request with John P. Lehman, whose address appears below, by November 20, 1980. The request must contain the information prescribed in § 260.20(d) of this chapter.

ADDRESSES: Comments should be sent to Docket Clerk, Office of Solid Waste (WH-562), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

Requests for hearing should be addressed to John P. Lehman, Director, Hazardous and Industrial Waste Division, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, Washington, D.C. 20460. Communications should identify the regulatory docket number "Section 3001/Temporary Exclusion."

The public docket for this interim final rule is located in Room 2711, U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460 and is available for viewing from 8 a.m. to 4 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: Matthew A. Straus, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C., (202) 755-9187.

SUPPLEMENTARY INFORMATION:

I. Temporary Exclusion From Subtitle C Regulation for Certain Chromium-Bearing Wastes

The Agency today has proposed to amend the characteristic of EP toxicity in 40 CFR 261.24 to apply to hexavalent rather than to total chromium (published elsewhere in Part XI of this issue of the Federal Register). The Agency also has taken final regulatory action today with respect to a number of hazardous waste listings (published elsewhere in Part XI of this issue), including the delisting of certain trivalent chromium-bearing waste streams. The present action is necessary to allow these other actions to have their intended effect. Thus, until the characteristic of EP toxicity is amended finally, all wastes remain subject to the existing standard based upon total chromium. We are concerned that the characteristic as it now stands identifies as hazardous certain trivalent chromium-bearing wastes which are unlikely to create a substantial present or potential hazard to human health or the environment when mismanaged, imposing significant regulatory burden without achieving any statutory purpose. A temporary exclusion for this limited class of wastes is needed to prevent this result.

We consequently will exclude temporarily from hazardous waste status certain chromium-bearing wastes. It must be emphasized that this exclusion will apply only insofar as the wastes would be hazardous because they fail the EP toxicity characteristic for chromium or because they are listed solely because of their chromium content. If they are hazardous for any other reason (*i.e.*, they fail the EP characteristic for any constituent but chromium, fail any other characteristic, or are listed for any other reason) they remain in the RCRA control system. The factors which must be present for chromium-bearing waste to qualify for this temporary exclusion are:

- —The waste contains trivalent chromium exclusively (or nearly exclusively);
- —The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively), which process does not generate hexavalent chromium; and
- —The waste is typically and frequently managed in non-oxidizing environments.

If a generator or an industry-wide group of generators can demonstrate that its (or their) wastes satisfy these prerequisites, the Agency will grant the waste a temporary exclusion and the waste will not require subtitle C management during an interim period. When the amended EP toxicity characteristic becomes final, this temporary exclusion will no longer be in effect, and waste generators will have to analyze their EP extracts for the presence of hexavalent chromium.

Our basis for selecting these factors and our views as to how these factors will be applied are as follows. In light of our decision to distinguish between tri- and hexavalent chromium for purposes of subtitle C regulation, wastes containing exclusively or nearly exclusively trivalent chromium may well not be hazardous. There is, however, a problem in demonstrating the absence of hexavalent chromium, due to the present lack of an analytical method which distinguishes between trivalent and hexavalent chromium at low ppm concentrations in waste extracts. (The Agency today proposed adoption of such a method, but is undertaking further study of the method before final promulgation.) In evaluating requests for temporary exclusions, we therefore will regard waste and waste extract

analytical data for chromium (VI) as highly relevant, but not as determinative. We also contemplate that generators will demonstrate the absence of hexavalent chromium by using process chemistry information, *i.e.*, showing that the industrial process generating the waste does not generate hexavalent chromium, so that hexavalent chromium will not be found in the wastes or will be present only in minimal concentrations.[1] In addition to process information, leachate and groundwater monitoring data and EP extract analyses are highly probative, since if chromium is shown to be present in substantially immobile form, the likelihood is that it is present in the trivalent state.

We also believe that at present there is no adequate assurance that chromium-bearing wastes do not contain potentially harmful concentrations of hexavalent chromium unless the industrial process itself is trivalent chromium-based. Although we are aware that the standard method of treatment of hexavalent chromium-containing wastewaters is to reduce the chromium and to precipitate it as chromium (III) hydroxide, we believe that this process is often incomplete, absent a strong economic incentive to fully reduce all chromium present. Certainly, we believe it would be highly imprudent to exclude from regulation these wastes, even temporarily, absent much greater assurance that they do not contain potentially dangerous amounts of hexavalent chromium.

Finally, to assure that any trivalent chromium which migrates from the waste will not oxidize to the hexavalent state, we will require that the wastes be managed typically and frequently in non-oxidizing environments. A non-oxidizing environment is one in which there is either a relative lack of oxygen or one which contains reducing agents sufficiently strong to cause reduction of the contaminant in question. These conditions ordinarily are present in landfills and surface impoundments. (Ham, R. A., et al., 1978, Background Study on the Development of a Standard Leaching Test.)

The Agency believes that site monitoring data is particularly important in demonstrating that chromium-bearing wastes are being managed in non-oxidizing environments. Thus, a demonstration by means of leachate and groundwater monitoring data that chromium remains essentially immobile in its actual management environment indicates that chromium remains in the insoluble and strongly adsorbed trivalent state, and therefore is not being oxidized (*see e.g.*, Comments of Berwick Sewer District, July 16, 1980; Comments of Alley, Young & Baumgartner, July 11, 1980 where appropriate leachate and groundwater monitoring data is presented).

II. Wastes Meeting the Temporary Exclusion Factors

We are presently aware of three groups of wastes meeting the temporary exclusion factors. The first group are the tannery wastes listed as hazardous in § 261.32 (EPA Hazardous Waste Nos. K053–058), and any other waste scrap leather generated by the leather tanning industry. As shown in the comments of many individual tanners and the comments of the Tanners' Council of America, these wastes contain nearly exclusively trivalent chromium. The industrial process generating the waste likewise utilizes trivalent chromium. Hides, in fact, cannot be tanned successfully with hexavalent chromium. Tanners thus either use trivalent chromium as a tanning agent, or, should trivalent chromium be unavailable, use hexavalent chromium and reduce it so that the tanning process can be completed. In either case, there appears to be an overwhelming commercial incentive to keep hexavalent chromium out of the process and hence out of the process wastes.

These wastes furthermore ordinarily are managed in non-oxidizing landfill environments. We therefore believe that an adequate showing has been made to justify the temporary exclusion of these wastes due to their chromium content.[2]

The second group of wastes within the temporary exclusion is waste leather scrap from the shoe manufacturing and other leather product manufacturing industries.[3] These wastes are substantively identical to tannery wastes (being composed of the same trivalent chromium-tanned hides involved in the tanning process), and so contain trivalent chromium exclusively or nearly exclusively. These wastes also are ordinarily managed in landfills, and so are unlikely to be oxidized.

The third group of wastes within the temporary exclusion are wastewater treatment sludges from the production of TiO_2 (titanium dioxide) pigment using chromium bearing ores by the chloride process (EPA Hazardous Waste No. K074). The chromium in the process effluent is trivalent, arising directly from the entirely trivalent component of the rutile or ilmenite ores used as a raw material. At no stage of the manufacturing process is there an opportunity for oxidation of the trivalent chromium. The resultant sludges thus are expected to contain only trivalent chromium. (*See* Commments of E.I. du Pont de Nemours & Co., September 15, 1980, pp. 8–10 describing the TiO_2 manufacturing process, and showing that only chromium (III) is present; leachate data submitted in these comments likewise tends to show that only trivalent chromium is present.) These wastes are usually disposed of in landfills or by ocean dumping. One plant uses a lined lagoon and one uses deep-well injection. (U.S. EPA Hazardous Waste Listing Background Document, July 7, 1980, pp. 87–89.) These disposal situations do not offer opportunity for the oxidation of the chromium component. (Ham, 1979; Fukai, R., 1967, Valency State of Chromium in Sea Water, *Nature* 213: 901).

III. Procedures for Obtaining a Temporary Exclusion

The temporary exclusion is not limited to the wastes discussed specifically in Part II above. Other wastes also may meet the temporary exclusion factors and will be excluded if a proper showing is made to the Agency. Eligibility for a temporary exclusion may be requested by filing a petition for rulemaking under § 260.20(a). Petitions may be filed by individual generators, or on an industry-wide basis. Each petition must demonstrate why the wastes in question meet the temporary exclusion standards. Petitions then will be processed by the Agency in accord with the procedures set forth in § 260.20 (c)-(e). It should be noted that generators of the wastes which already have been determined to be within the temporary exclusion (*i.e.*, the wastes discussed in II. above) are not required to petition the Agency.

IV. Interim Final Promulgation

The temporary exclusion for this limited class of chromium-bearing wastes is being promulgated in interim final form. Thus, the three types of

[1] Hexavalent chromium concentrations below 5 mg/l certainly will be considered minimal. This level is based on the maximum concentration level for hexavalent chromium to be contained in the amended characteristic of EP toxicity.

[2] Since these wastes were listed for reasons in addition to their chromium concentrations, the temporary exclusion for chromium does not by itself remove them from the hazardous waste management system. We are, however, delisting tannery wastes for these additional factors in an action taken elsewhere in today's **Federal Register**. The net result of these actions will be that these tannery wastes will no longer be listed, will not be considered hazardous if they fail the EP toxicity characteristic for total chromium, but will be hazardous if they fail the EP toxicity characteristic for any other constituent, or fail any other characteristic.

[3] These wastes were not listed, but some may fail the test for the characteristic of EP toxicity for chromium.

wastes now within the temporary exclusion are no longer subject to the hazardous waste regulations based on their chromium content. The provision also is final for purposes of the 90-day petition deadline under Section 7006. The public will, however, have an additional opportunity to comment on the provision before it is published as a "final final" regulation.

The Agency does not take this procedural course lightly, but believes that unusual circumstances justify our action. First, many affected persons effectively have had the opportunity to comment on the substance of the provision by virtue of their comments on the interim final portions of the May 19 and July 16 regulations, principally the hazardous waste listings in § 261.32. Thus, much of the data supporting today's action was supplied in comments submitted by the tanning industry and (to a lesser extent) the titanium dioxide production industry. We therefore believe that the policy underlying the prior notice and comment requirement has been substantially satisfied here.

Second, as already noted, immediate action is necessary to give effect to final regulatory action taken today delisting waste streams from the tanning and TiO_2 production industries. These delisting actions present no prior notice and comment issues because the listings themselves were not yet promulgated in final form. However, certain of the delisted wastes might still fail the EP for total chromium, and would consequently remain in the system until the EP toxicity characteristic is amended finally. Immediate promulgation of the temporary exclusion consequently is necessary to allow the delistings to have their intended consequence.

Finally, we believe that use of advance notice and comment procedures would be impracticable and contrary to the public interest, and therefore that good cause exists for adopting these regulations in interim final form (*see* 5 U.S.C. 553(b)(B)). Although the "good cause" exception is narrow, courts have emphasized that "(i)t is an important safety value to be used where delay would do real harm." *U.S. Steel Corp.* v. *EPA*, 595 F.2d 207, 214 (5th Cir., 1979). We believe delay in promulgating the temporary exclusion could cause significant harm to the regulated community, particularly to the tanning industry. The tanners have indicated that there is a severe shortage of hazardous waste landfill capacity, especially in New England where many tanneries are located, so that disposal costs will increase very substantially even if hazardous waste management is required for only a short period. (*See, e.g.*, Comments of A. C. Lawrence Leather Co., July 10, 1980.) Courts have approved immediate promulgation of rules in like circumstances where failure to implement regulations would cause severe market dislocations. *See De Rieux* v. *Five Smiths, Inc.*, 499 F.2d 1321, 1332 (TECA), *cert. denied* 419 U.S. 896 (1974) (promulgation of government price controls); *Reeves* v. *Simon*, 509 F.2d 455, 458–59 (TECA 1974), *cert. denied*, 420 U.S. 991 (1975) (gasoline station fuel allocation regulations). The same principle applies here.

Dated: October 27, 1980.

Douglas M. Costle,

Administrator.

Title 40 CFR Part 261 is revised as follows:

1. In § 261.4, Exclusions, paragraph (b)(6) is added to read as follows:

§ 261.4 Exclusions.

* * * * *

(b) * * *

(6) (i) Wastes which fail the test for the characteristic of EP toxicity because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the characteristic of EP toxicity for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in (i)(A), (B) and (C) (so long as they do not fail the test for the characteristic of EP toxicity, and do not fail the test for any other characteristic) are

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/ wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chorme tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

[FR Doc. 80-33555 Filed 10-29-80; 8:45 am]

BILLING CODE 6560-26-M

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40 CFR Part 261

[SW FRL 1636-1c]

Hazardous Waste Management System; Identification and Listing of Hazardous Wastes

AGENCY: Environmental Protection Agency.

ACTION: Final action amending interim final regulation.

SUMMARY: This regulation removes from the list of regulated hazardous wastes the wastes from the leather tanning industry and the titanium dioxide production industry which were listed as hazardous in interim final form in the Federal Register on May 19, 1980 (45 FR 33124) and July 16, 1980 (45 FR 47834). The preamble also discusses why other listed waste streams containing chromium will still be listed due to the presence of chromium. This action is

being taken as a result of other regulatory action taken concerning the regulation of chromium-bearing wastes under the hazardous waste managment program in documents published elsewhere in this Part XI of this Federal Register.

EFFECTIVE DATES: This action is effective on publication.

ADDRESSES: The public docket for this regulation is located in Room 2711, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460, and is available for viewing from 9 a.m. to 4 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: Matthew A. Straus, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460, (202) 755-9187.

SUPPLEMENTARY INFORMATION:

I. Decision To Delist Wastes From TiO_2 Production and From the Leather Tanning and Finishing Industry

In other regulatory action taken today, the Agency has indicated that its principal regulatory concern in regulating chromium-bearing wastes under the hazardous waste management program is hexavalent rather than total chromium. The Agency consequently has reviewed all of the interim final and proposed waste listings in 40 CFR Part 261, Subpart D which listed chromium as a waste constituent of concern, and reevaluated these wastes to determine if they should continue to be listed due to the presence of chromium. We have decided that two groups of wastes, those from titanium dioxide production by the chloride process, and those from leather tanning and finishing, no longer should be listed due to chromium. We have further determined that leather tanning and finishing industry wastes also should not be listed for any other basis at the present time. We consequently are delisting both groups of wastes.[1]

We also reviewed all of our other listings of chromium-bearing wastes (except for those wastes for which the comment period has been extended). We believe that all of these other wastes are likely to contain significant concentrations of hexavalent chromium, and therefore we are not amending our initial listings. We note further that many of these wastes are listed for constituents other than chromium, and our actions today do not in any way affect these additional bases for listing.[2]

A. Wastes Generated From TiO_2 Production

On July 16, 1980, the Agency adopted as an interim final listing, under 40 CFR § 261.32 wastewater treatment sludges from TiO_2 production via the chloride process (*see* 45 *FR* at 47834). On reevaluation, we have decided not to list this waste stream because it is derived from a trivalent chromium-based process and contains trivalent chromium exclusively or virtually exclusively. The titanium dioxide production process results in a waste stream which contains chromium (III) chloride. The presence of this compound results from the fact that the rutile and ilmenite ores used as raw materials can contain as much as 45% chromium (III) oxide. The chromium-bearing waste stream from this process thus contains chromium only in the trivalent form, and the resulting wastewater sludges therefore are not expected to contain any hexavalent chromium.

B. Wastes Generated by the Leather Tanning and Finishing Industry

The Agency's May 19 interim final waste listings included seven waste streams generated by the leather tanning and finishing industry (EPA Hazardous Waste Numbers KO53-059). These wastes were listed for the presence of chromium, chromium and lead, and (in the case of the wastewater treatment sludges generated by plants in certain subcategories) chromium and reactivity. With respect to chromium, the Agency has determined that these wastes contain exclusively or virtually exclusively trivalent chrome and therefore do not warrant listing on this basis. The leather tanning process depends on the chemical reaction of trivalent chromium with the free amine and hydroxyl groups on the hides' protein chains. This reaction will not occur if hexavalent chromium is used, so that there is a very strong commercial justification for the absence of hexavalent chromium in these wastes. Although it is true that if the trivalent tanning agent is not readily or economically available, tanneries use hexavalent chrome as a starting material, the chromium is then reduced to the trivalent state either before use in the tanning process or *in situ* during the tanning process (a "two bath" process now largely obsolete). Both economics and the recognized dangers inherent in the unnecessary risk in handling hexavalent chromium serve to assure the conversion to the trivalent form.[3]

The wastes resulting from the tanning process, therefore, are overwhelmingly in the trivalent state. In addition, leachate and groundwater monitoring data submitted by individual tanners indicate that the chromium contained in these wastes has low migratory potential under most waste management conditions, and also that it has very limited mobility should migration occur, confirming that these wastes contain chrome (III), rather than the highly mobile hexavalent chromium.

Certain tanning wastes were listed because of the presence of lead. Substantial data submitted by industry indicate convincingly, however, that lead is not typically used in the tanning process, nor is it found in process wastes, in regulatorily significant amounts or concentrations. We consequently believe continued listing on this basis is inappropriate. Furthermore, these wastes remain subject to the EP toxicity characteristic, so that those wastes containing excessive concentrations of lead will still be brought into the hazardous waste management system.

Two wastewater treatment sludges were listed as hazardous due to reactivity, more specifically because of the possibility of release of harmful concentrations of hydrogen sulfide gas under usual waste management conditions. Historical waste management data submitted by industry indicates, however, that harmful release of hydrogen sulfide does not occur typically and frequently in waste management practice. Rather, this problem is more likely to occur during the tanning process, prior to waste generation. (Comments of Robert M. Lollar, Technical Director, Tanners' Council of America, August 12, 1980.)

We have determined to delist these sludges for reactivity. We again note, however, that the wastes remain subject to the reactivity characteristic, so that these wastes should be deemed hazardous if harmful hydrogen sulfide generation occurs, or has occurred, during waste management. For example, if a generator is aware of prior dangerous release of hydrogen sulfide in managing these sludges, for example from storing these sludges in enclosed tanks, EPA must be notified that the wastes are reactive, and the wastes must be managed pursuant to Subtitle C regulatory controls. We also note that the Agency is working to quantify the present provision in the reactivity characteristic governing hydrogen sulfide and hydrogen cyanide-generating

[1] We also are removing any reference to these wastes from Appendix VII to Part 261.

[2] We also note that the Agency may choose not to finalize the listing of certain of these waste streams for independent reasons when finalizing the May 19 interim final list of hazardous wastes.

[3] Thus, in one tanning facility visited by the Agency, when trivalent chromium is not available, a twenty percent excess of reductant is added to the hexavalent chromium to ensure that reduction will go to completion.

wastes (§ 261.23(a)(5)), and that these sludges will be subject to the revised characteristic when promulgated.

EPA is also investigating the possibility that these tannery wastes may be hazardous for reasons other than those for which they were listed originally. A possible source of waste contamination is use of hexavalent chromium-containing chrome pigments, and of benzidine and benzidine congener dyes in the finishing process. For example, dyes derived from the chemicals benzidine, 3,3'-dimethylbenzidine, and 3,3'-dimethoxybenzidine comprise approximately one fourth of the 3.1 kkg of dyes used by the tanning industry (MRI, 1979, "A Preliminary Materials Balance for Dyes and Pigments from Benzidine and Three Benzidine Derivatives." EPA Contract No. 68-01-3896, Draft Final Report, August 31, 1979), and may be present in these wastes. We are concerned about the potential carcinogenicity of the dyes themselves, and about the possible reduction of the dyes in the waste streams by heat, light, and chemical reducing agents, or their metabolism *in vivo* to the carcinogenic parent compounds benzidine, 3,3'-dimethylbenzidine and 3,3'-dimethoxybenzidine. In addition, certain biocides (notably phenolic derivatives) are used in the tanning process, and may contaminate process wastes. The Agency solicits information as to these practices, as to concentrations of these materials and their breakdown products in process wastes, and as to whether the wastes thereby should be considered to be hazardous.

II. Retention of Chromium as a Waste Constituent of Concern in Other Hazardous Waste Listings

Certain of the other May 19 and July 16 interim final and proposed waste listings are of wastes containing chromium as a waste constituent of concern. (*See* 45 FR 33123-124, 33137; and 45 FR 47833-834, 47836). We have reevaluated these listings to determine if the wastes should continue to be listed due to the presence of chromium.[4] It is our conclusion that all of these chromium-bearing waste streams should continue to be listed as hazardous due to chromium content because all derive from processes which use or produce a waste stream which contains hexavalent chromium. The basis for our conclusion is set out below.

[4] This discussion does not apply to chromium-containing waste streams for which the comment period has been extended. Industrial painting wastes, paint manufacturing wastes, and wastes from ferroalloys production are in this category.

The chromium-containing waste streams we have listed in interim final form or have proposed for listing are generated in the manufacture of inorganic pigments (EPA Hazardous Waste Nos. K002-008), in petroleum refining (EPA Hazardous Waste Nos. K048-051), in the manufacture of iron and steel (EPA Hazarous Waste Nos. K061-063), in secondary lead smelting (EPA Hazardous Waste No. K069), in electroplating (EPA Hazardous Waste No. F006), and in ink formulation (EPA Hazardous Waste No. K086). The chrome pigment process wastes are believed to contain hexavalent chromium because the production process requires the use of chromates, which are necessarily hexavalent chromium-containing compounds. Electroplating industry wastes likewise derive from processes using chromates, and so also are expected to contain hexavalent chromium. Chromate (Cr (VI)) pigments are constituents of the listed ink formulations, so that process wastes also should contain hexavalent chromium.

The various listed petroleum refining wastes likewise use chromates, in this case as corrosion inhibitors in cooling towers. The listed wastes from this industry are all derived from cooling tower wastewater streams, and thus are expected to contain hexavalent chromium.

The iron and steel industry and secondary lead industries generate chromium-containing emission control dusts and sludges. These production processes involve oxidative processes occurring at elevated temperatures, conditions known to cause oxidation of chromium (III) to chromium (VI). Spent pickle liquor, another listed waste from the steel industry, likewise is generated in oxidizing conditions (the pickling operation itself), and so will contain chrome (VI).

We are aware that treatment of chromium-containing wastewaters most often consists of the reduction of hexavalent chromium to the trivalent state and the subsequent precipitation of chromium (III) hydroxide. If the reduction is not carried out to completion, however, the hexavalent chromium may be entrained in the chromium (III) hydroxide precipitate. Further, in light of the large concentrations of chromium present in these wastewater streams, and the very small concentrations of the carcinogen hexavalent chromium needed to make a treatment sludge hazardous, we do not believe that the chromium in these wastewater streams will be fully reduced, so that these wastes remain capable of causing substantial harm if mismanaged.

Dated: October 27, 1980.

Douglas M. Costle,

Administrator.

Title 40 CFR, Part 261 is amended by deleting from the lists of hazardous wastes contained in § 261.32 the following waste streams:

§ 261.32 [Amended]

K053—Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

K054—Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

K055—Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

K056—Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

K057—Wastewater treatment sludge generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

K058—Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

K059—Wastewater treatment sludges generated by the following subcategory of the leather tanning and finishing industry: hair save/non-chrome tan/retan/wet finish.

K074—Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

[FR Doc. 80-33809 Filed 10-29-80; 8:45 am]

BILLING CODE 6560-30-M

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40 CFR Part 265

[SW FRL 1623-7]

Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Revisions to final rule and interim final rule.

SUMMARY: The Resource Conservation and Recovery Act (RCRA) hazardous waste regulations, as promulgated May 19, 1980, in §§ 265.112(a) and 265.142(a) require owners or operators of all hazardous waste facilities to have closure plans, as well as cost estimates based on these plans, on the effective date of the regulations. At the same time, owners or operators of hazardous waste disposal facilities are also required in §§ 265.118(a) and 265.144(a) to have post-closure plans and associated cost estimates.

The Agency is amending these regulations to allow the owners or operators of all hazardous waste facilities to have up to six months *after* the effective date of these regulations to prepare a written closure plan, post-closure plan (if applicable), and cost estimates for closure and post-closure (if applicable).

The Agency is extending the period for preparing closure and post-closure plans for disposal facilities because planning for closure and post-closure at these facilities is an extremely important activity. Because these plans are so important, the Agency believes that it should provide owners or operators more time to prepare them so that they will be well thought out.

EFFECTIVE DATE: November 19, 1980.

FOR FURTHER INFORMATION CONTACT: Lawrence G. Buc, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, (202) 755-9190.

SUPPLEMENTARY INFORMATION:

I. Authority

This amendment is issued under the authority of Sections 1006, 2002(a), and 3004 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6905, 6912(a), and 6924.

II. Background

The RCRA hazardous waste regulations, as promulgated May 19, 1980, 45 FR 33064 *et seq.* in Sections 265.112(a) and 265.142(a) require owners or operators of all hazardous waste facilities to have closure plans, as well as cost estimates based on these plans, on the effective date of the regulations (November 19, 1980). At the same time, owners or operators of hazardous waste disposal facilities are also required in §§ 265.118(a) and 265.144(a) to have post-closure plans and associated cost estimates. The amendments to the regulations EPA is promulgating today modify these requirements.

The amended regulations allow the owner or operator of a hazardous waste facility up to May 19, 1981 (six months after the effective date of these regulations) to prepare a written closure plan, post-closure plan for a disposal facility, and cost estimates for closure and post-closure for a disposal facility. An owner or operator of a facility who decides to close his facility within this six-month period must nevertheless submit a closure plan and post-closure plan for a disposal facility at least 180 days before the date he expects to begin closure as required in 40 CFR Part 265, Subpart G, §§ 265.112(c) and 265.118(c).

The Agency is extending the period for preparing closure and post-closure plans for disposal facilities because planning for closure and post-closure at these facilities is an extremely important activity. Because these plans are so important, the Agency believes that it should provide owners or operators more time to prepare them so that they will be well thought out.

As a necessary consequence of extending the time for preparing closure and post-closure plans for facilities, EPA is extending the time for preparing closure and post-closure cost estimates for facilities. Cost estimates must be based on the closure and post-closure plans, so they cannot be prepared until the plans have been prepared.

The Office of Management and Budget recently approved EPA's Part 264 and 265 reporting requirements under the Federal Reports Act on the condition that EPA extend until May 19, 1981, the deadline by which disposal facilities (landfills, land treatment facilities, and surface impoundments which intend to close as landfills) must prepare closure and post-closure monitoring and maintenance plans. The Agency is convinced that owners or operators of *all* facilities, given an additional six months, will be able to prepare better plans and more accurate cost estimates. For this reason, and to avoid confusion as to when these plans are required, EPA is granting the time extension to all facilities.

Dated: October 27, 1980.

Douglas M. Costle,

Administrator.

For the reasons described above, Title 40 of the Code of Federal Regulations is amended as follows:

§ 265.112 [Amended]

1. In § 265.112(a), in the first sentence, replace the phrase "On the effective date of these regulations" with the phrase: "On May 19, 1981."

§ 265.118 [Amended]

2. In § 265.118(a), in the first sentence, replace the phrase "On the effective date of these regulations" with the phrase: "On May 19, 1981."

§ 265.142 [Amended]

3. In § 265.142(a), in the first sentence, replace the phrase "On the effective date of these regulations" with the phrase: "On May 19, 1981."

§ 265.144 [Amended]

4. In § 265.144(a), in the first sentence, replace the phrase "On the effective date of these regulations" with the phrase: "On May 19, 1981."

[FR Doc. 80-33870 Filed 10-29-80; 8:45 am]

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40 CFR Part 261

[WH-FRL 1648-4]

Hazardous Waste Management System: Identification and Listing of Hazardous Waste

AGENCY: Environmental Protection Agency (EPA).

ACTION: Technical amendment; final rule.

SUMMARY: In its regulations on the identification and listing of hazardous waste, the Environmental Protection Agency (EPA) is amending the section "Analytical Procedures for Analyzing Extract Contaminants" in Appendix II of Part 261. This amendment merely clarifies confusing references to two sets of analytical methods, each of which delineates the same methods insofar as the applicability of the subject section of Appendix II. Therefore, this amendment does not change the substance of Appendix II.

EFFECTIVE DATE: This action is effective immediately.

FOR FURTHER INFORMATION CONTACT: David Friedman, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, (202) 755-9187.

SUPPLEMENTARY INFORMATION: The section on "Analytical Procedures for Analyzing Extract Contaminants" in Appendix II of Part 261 promulgated on May 19, 1980 (45 FR at 33128) referenced certain water and wastewater analytical methods and implied that these methods should be used in analyzing EP Toxicity Procedure extracts. That section also referenced "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" and implied that these methods should be used to analyze these same extracts. These

references to two sets of references have confused the regulated community and have generated many inquiries to the Agency for clarification. Because the latter reference incorporates and clarifies for use in analyzing EP extracts the methods described in the former references, EPA is today promulgating the following technical amendment to change the subject section of Appendix II so that only the latter reference is used.

Dated: October 24, 1980.

Douglas M. Costle,

Administrator.

Title 40 of the Code of Federal Regulations is amended by deleting the existing language under the section of Appendix II of Part 261 titled "*Analytical Procedures for Analyzing Extract Contaminants*" and substituting the following language:

The test methods for analyzing the extract are as follows:

(1) For arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2,4-D[2,4-dichlorophenoxyacetic acid] or 2,4,5-TP [2,4,5-trichlorophenoxypropionic acid]: "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," [SW-846], U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460.

(2) [Reserved]

For all analyses, the methods of standard addition shall be used for quantification of species concentration.

[FR Doc. 80-33571 Filed 10-29-80; 8:45 am]

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32 STATE AUTHORIZATION APPLICATIONS, 500 PERMIT APPLICATIONS RECEIVED BY EPA

The Environmental Protection Agency has received 32 applications from states seeking interim authorization of their hazardous waste programs and 500 permit applications from hazardous waste handling companies seeking to continue operating at interim status, John Skinner director of the state programs and resource recovery division in EPA's Office of Solid Waste, said Oct. 17

Skinner told BNA that of the 32 state applications received eight are final applications for interim authorization of hazardous waste programs, while the remaining 24 are draft state applications He added that 18 draft applications have been received from states seeking cooperative arrangements for EPA to run the hazardous waste programs in those states

As of Oct 10, EPA had received approximately 60,000 notifications from persons handling hazardous waste (Current Developments, Sept 12, p. 681), and had processed and analyzed about 30,000 according to Skinner He said that of the 30,000 notifications processed, about 24,000 are hazardous waste generators, 5,000 are transporters, 15,000 are treatment, storage, or disposal facilities, 800 are underground injection control wells, and 500 are federal facility handlers. The EPA official noted that it appears a large portion of generators also have on-site treatment.storage, and disposal facilities.

The agency had sent out, as of Oct. 10, 20,000 acknowledgements of the notifications, with an EPA identification number for each hazardous waste notifier, the agency official said. The identification number is to be used in all future correspondence with EPA regarding hazardous wastes. Skinner observed that EPA probably would send out all the acknowledgements by the first week in November.

After all the notifications are processed, they will be compiled in a report, which should be released around the first week in December, according to Skinner.

Permit Applications From Companies

Skinner stated that EPA has received approximately 500 Part A applications from existing hazardous waste treatment storage, and disposal facilities seeking to continue interim status operation until they can obtain permits under the hazardous waste program.

Although an EPA spokesperson said the agency was concerned about the slow rate at which companies were applying for interim status, Skinner said Part A permit applications probably all will come in on the Nov. 19 deadline day, just as the notifications all came in at the last minute from facilities handling hazardous wastes. He added that EPA should receive at least 15,000 Part A permit applications based on the 15,000 treatment, storage and disposal facilities which already have notified EPA and been processed. Skinner said after all the notifications are processed, he expects from 25,000 to 30,000 Part A applications to be filed

EPA regional office teams are coming to Washington D.C. headquarters in early November to be trained to process Part A applications, Skinner continued. EPA will emphasize issuing acknowledgements and checking to see if firms filed notifications by Aug. 18, sent their Part A applications in by Nov. 19, and were in existence by the latter date

After this, Skinner explained, EPA plans to send firms confirmation of their interim status. The agency then plans to review the applications and may seek additional information from firms

EPA plans subsequently to set priorities for issuing final permits, which are to be issued over a 5 to 10 year period

We've put together an enforcement strategy which suggests categories for high priority permits, Skinner said He explained that high priority permits would be targeted to new facilities, facilities which, through their Part A applications or interim status inspections, are identified as problem facilities, facilities requiring more than one type of permit, and "good" facilities EPA wants to permit in order to ensure continuing operation and additional disposal capacity

Enforcement

Skinner said EPA has already sent to its regional offices a list of "high potential" companies which probably should have notified EPA by August 18. These companies, which could produce hazardous wastes, involve the following industries: pesticides; organic chemicals, inorganic pigments; primary copper, lead, and zinc, secondary lead, wood preserving; leather tanning and fishing, iron and steel, paint manufcturing, ink formulation and primary aluminum

According to Skinner, EPA will compare those that notified with the high potential notifiers list. For companies which did not notify, EPA regional offices will follow up with a letter of inquiry stating that EPA believes the firm should have notified.

EPA Region II in New York already sent out 350 letters of inquiry and 30 notices of violations, which state that EPA believes the firm is in violation for not notifying and requesting immediate notification. "Region II is the furthest along," Skinner noted, although many regions are anticipating sending out letters of inquiry soon.

Compliance Monitoring for Interim Status

Skinner explained that EPA is working on integrating the compliance monitoring for the interim status standards with the compliance monitoring conducted by EPA's hazardous waste site enforcement task force.

He added that within the next month, each EPA regional office will develop a plan for inspection, enforcement, and compliance monitoring it will be pursuing in the next year, starting with the notification list. Skinner said enforcement actions would be taken as soon as possible after Nov. 19, the effective date of the hazardous waste program