

# **federal register**

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Friday  
January 16, 1981

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**Part XIX**

## **Environmental Protection Agency**

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**Identification and Listing of Hazardous  
Waste; Final Rule and Temporary  
Suspension of Interim Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 261**

[SWH-FRL 1627-3]

**Hazardous Waste Management System; Identification and Listing of Hazardous Waste**

**AGENCY:** U.S. Environmental Protection Agency.

**ACTION:** Final rule and temporary suspension of interim final rule.

**SUMMARY:** In response to public comment, the Environmental Protection Agency (EPA) today is finalizing the listings of thirteen hazardous wastes from specific sources that were proposed or promulgated in interim final form in the *Federal Register* on July 16, 1980 (45 FR 47832-47836). In addition EPA is deleting two wastes from its interim final hazardous waste list, and is deferring action on and suspending the effectiveness of nine wastes listed in interim final form on July 16, 1980, as well as deferring action on one waste that was proposed on that date.

EPA is also amending Appendix VII of this Part by finalizing the toxic constituents of concern for each listed waste promulgated today.

**DATES:** Effective dates: Waste listings promulgated in interim final form on July 16, 1980, which are finalized today, become effective on January 16, 1981. Waste listings which were proposed on July 16, 1980, and which are finalized today, become effective on July 16, 1981.

See supplementary information for further details.

**ADDRESSES:** The public docket for this regulation is located in Room 2711, U.S. Environmental Protection Agency, 401 M Street 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:** Dr. Judith S. Bellin, Office of Solid Waste (WH-565), U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460, (202) 755-9187.

**SUPPLEMENTARY INFORMATION:** Before discussing the substance of today's action, the Agency wishes to state clearly the regulatory obligations which result from it.

**I. Compliance Dates for Regulatory Obligations**

*A. Notification*

**1. Finalized Waste Listings Promulgated in Interim Final Form on July 16, 1980.**

Persons who generate, transport, treat, store, or dispose of any hazardous waste listed in interim final form on July 16, 1980 which waste listing is now being finalized, are not required to notify EPA as a result of today's action. Wastes in this category are hazardous wastes K071, K073, K083, K084, K085, K086, and K087. We do not consider today's action to be a revision of the Section 3001 regulations within the meaning of Section 3010(b). All such persons, of course, should have already notified EPA by or before October 16, 1980.

**2. Finalized Waste Listings Which Were Proposed on July 16, 1980.**

Persons who generate, transport, treat, store, or dispose of wastes which were proposed for listing on July 16, 1980 which are being finalized today—hazardous wastes K101-K106—are not required to notify so long as they previously have notified the Agency that they handle a hazardous waste and have received an I.D. number. Persons who have not previously notified EPA and who generate or handle these wastes must now notify EPA of their activities under Section 3010 no later than April 16, 1981. Notification instructions are set forth in 45 FR 12746 (February 26, 1980).<sup>1</sup>

*B. Other Compliance Dates*

Beginning on January 16, 1981, persons

<sup>1</sup>Our authority for this action is the recent amendment to Section 3010(a) of RCRA contained in the Solid Waste Disposal Act Amendments of 1980 (Pub. L. 96-452 (October 21, 1980)), which amendment leaves the requirement for notification following revision of the Section 3001 regulations to the discretion of the Administrator.

handling wastes listed in final form in § 261.32, which listings were promulgated in interim final form on July 16, 1980, must comply with all applicable standards for hazardous waste generators, transporters, and owners or operators of hazardous waste management facilities set forth in 40 CFR Parts 262 through 266 and 122 through 124.

Beginning on July 16, 1981, persons handling wastes listed in final form in § 261.32 which were proposed for inclusion on July 16, 1980, must comply with all applicable standards for hazardous waste generators, transporters, and owners or operators of hazardous waste management facilities set forth in 40 CFR Parts 262 through 266 and 122 through 124.

The owners or operators of all existing hazardous waste management facilities which treat, store or dispose of wastes listed in these regulations which were proposed for inclusion on July 16, 1980, and who wish to qualify for interim status under Section 3005(e) of RCRA, must file a notification by April 16, 1981 unless they have notified previously (as described in A. 2. above), and must file a permit application by July 16, 1981 (see 40 CFR 122.23(a) (1) and (2)).

Owners or operators of facilities who have qualified for interim status and wish to manage wastes listed in the final regulations which were proposed for listing on July 16, 1980 must submit an amended permit application by July 16, 1981 (see 40 CFR 122.23(c)(1)). Owners or operators of facilities with interim status who do not comply with these requirements are precluded from managing these wastes after July 16, 1981.

Table I summarizes the Agency's action on each waste stream discussed in the July 16 *Federal Register* notice, and gives the effective date of each final regulation.

**Table I.—Summary of the Agency's Disposition of Each Waste Stream Listed in Interim Final Form or Proposed for Listing on July 16, 1980**

EPA hazardous waste No.	Hazardous waste	Effective date and disposition
§ 261.31 Hazardous Waste From Nonspecific Sources		
F017 .....	Paint residues or sludges from industrial painting in the mechanical and electrical products industry.	Suspended temporarily.
F018 .....	Wastewater treatment sludge from industrial painting in the mechanical and electrical products industry.	Suspended temporarily.

Table I.—Summary of the Agency's Disposition of Each Waste Stream Listed in Interim Final Form or Proposed for Listing on July 16, 1980—Continued

EPA hazardous waste No.	Hazardous waste	Effective date and disposition
§ 261.32 Hazardous Waste From Specific Sources		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	Jan. 16, 1981.
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.	(6 months after publication.)
K073	Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	Jan. 16, 1981.
K074	Wastewater treatment sludges from the production of TiO <sub>2</sub> pigment using chromium bearing ores by the chloride process.	Deleted (see 45 FR 72034, Oct. 30, 1980).
K078	Solvent cleaning wastes from equipment and tank cleaning from paint manufacturing.	Suspended temporarily.
K079	Water or caustic cleaning wastes from equipment and tank cleaning from paint manufacturing.	Suspended temporarily.
K081	Wastewater treatment sludges from paint manufacturing	Suspended temporarily.
K082	Emission control dust or sludge from paint manufacturing	Suspended temporarily.
K083	Distillation bottoms from aniline production	Jan. 16, 1981.
K103	Process residues from aniline extraction from the production of aniline.	(6 months after publication.)
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(6 months after publication.)
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	Jan. 16, 1981.
K101	Distillation tar residues from the distillation of aniline compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(6 months after publication.)
K102	Residue from the use of activated carbon for decolorizing in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(6 months after publication.)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	Jan. 16, 1981.
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(6 months after publication.)
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	Jan. 16, 1981.
K087	Decanter tank tar sludge from coking operations	Jan. 16, 1981.
K088	Spent potliners from primary aluminum production	Suspended temporarily.
K090	Emission control dust or sludge from ferrochromium-silicon production.	Suspended temporarily.
K091	Emission control dust or sludge from ferrochromium production	Suspended temporarily.
K092	Emission control dust or sludge from ferromanganese production	Deleted.
(Proposed)	Emission control dust from gray and ductile iron foundry cupola furnaces.	Deferred.

## II. Finalization of §§ 261.31 and 261.32 Hazardous Waste Lists

On July 16, 1980, EPA amended Subpart D of Part 261 by adding eighteen wastes to EPA's hazardous waste list (§§ 261.31 and 261.32, 45 FR 47833-47834). These lists were published in interim final form to allow the public an opportunity to comment on additional data the Agency had collected on these wastes since the close of the initial public comment period on the proposed Subtitle C regulations (43 FR 58957-58959, December 18, 1978).

At the same time, the Agency also proposed for comment seven additional hazardous waste listings (45 FR 47835-47836, July 16, 1980). All of these wastes were identified by the Agency in the course of developing the necessary technical data to support the July 16, 1980, interim final hazardous waste list.

The Agency received a number of comments on both the interim final and proposed hazardous waste listings. We have evaluated these comments

carefully and responded in detail in the respective listing background documents. We are setting forth in this preamble our disposition of the listings published in interim final and proposed form on July 16, 1980, summarizing the basis for our actions as to each of these listings. We also are responding to comments criticizing the Agency's decision to defer temporarily the listing of wastes from the woven fabric dyeing and finishing industry.

### A. Wastes for Which No Comments Were Received and No Changes Were Made to the Hazardous Waste Listings or to the Respective Background Documents

No comments were received on four of the hazardous waste listings published on July 16, 1980. In addition, the Agency is not making any substantive changes to either the hazardous waste listings or to the respective background documents as a result of its evaluation of these listings.

Included in this category are certain wastes from the production of veterinary pharmaceuticals (EPA Hazardous Waste Nos. K084, K101 and K102), and wastes from ink formulation (EPA Hazardous Waste No. K086). We therefore are promulgating all of these listings as final regulations.

### B. Waste for Which No Comments Were Received and No Changes Were Made to the Hazardous Waste Listing or Respective Background Document, But Final Implementation Has Been Temporarily Suspended

The Agency also received no comment on the hazardous waste listing of "spent potliners from primary aluminum production" (EPA Hazardous Waste No. K088). The Agency has no doubt that this waste should be listed as a hazardous waste, since it contains high concentrations of cyanide and has been involved in damage incidents. The lack of comment on the listing reflects further consensus that these wastes are indeed hazardous. However, the waste is excluded temporarily from control under Subtitle C under § 261.4(b) of the regulations. This provision implements Section 7 of the recently enacted Solid Waste Disposal Act Amendments of 1980 (Pub. L. 94-482, October 21, 1980), and states that solid wastes from the extraction, beneficiation and processing of ores and minerals (including coal) are excluded from regulation under Subtitle C of RCRA. For the time being, the Agency interprets the language of this exclusion to include solid wastes generated during the smelting and refining of ores and minerals, and so would exclude the waste streams from primary aluminum production. (See 45 FR 76618-76620 (November 19, 1980)). After reviewing the applicable legislative history and receiving public comment, the Agency may amend this exclusion to bring this waste (and others already promulgated) back under Subtitle C control.

### C. Wastes for Which Comments Were Received But No Changes Were Made to the Hazardous Waste Listings

The Agency received comments disputing the hazardousness of, or challenging aspects of the Agency's rationale for listing, certain wastes from the production of chlorine (EPA Hazardous Waste No. K073), aniline/nitrobenzene (EPA Hazardous Waste Nos. K083, K103 and K104), and coking operations (EPA Hazardous Waste No. K087). In evaluating these comments, the Agency did not agree with the substantive criticisms, and did not modify the listing descriptions or the

constituents which form the basis for listing the waste. The applicable background documents have been revised to respond to each comment.

*D. Wastes for Which Comments Were Received Which Resulted in Modifications to the Hazardous Waste Listing Descriptions, or to the Applicable Background Documents*

Comments were also submitted on hazardous wastes K085 and K105 (chlorobenzene production), and K071 and K106 (wastes from chlorine production by the mercury cell process). EPA has carefully reviewed these comments and has concluded that the listing description or the basis for listing should be changed, or the respective background document should be changed. The amended hazardous waste listings or background documents are discussed below, together with the reason for EPA's determination. More detailed discussion of the reasons underlying the respective dispositions is contained in the applicable background documents.

*(1) Wastes from the Production of Chlorobenzenes (EPA Hazardous Waste Nos. K085 and K105).*

(a) In listing the separate aqueous stream from the reactor product washing step in the production of chlorobenzenes, [K085] phenol, 2-chlorophenol and 2,4-dichlorophenol were included as toxic constituents of concern. After reviewing the comments, we believe that these constituents should not be so listed because they do not occur in this waste stream in concentrations sufficient to cause concern, even if the wastes were mismanaged. The background document has been changed, and Appendix VII has been revised to reflect this determination. However, we believe the waste stream to be hazardous because it contains benzene (a carcinogen), certain chlorinated benzenes, and the carcinogen 2,4,6-trichlorophenol in potentially harmful concentrations, as explained more fully in the listing background document.

(b) In response to a comment received from one manufacturer of chlorobenzenes, we have changed the listing description for the aqueous waste (K105) to indicate that the listed aqueous waste stream may result from some continuous processes, as well as from batch processes.

(c) One comment questioned whether distillation residues from chlorobenzene production (in this case, hexachlorobenzene production) were still intended to be listed when the hexachlorobenzene was then used as a reactant in the production of

pentachloronitrobenzene, rather than sold as a product. The distillation residues are indeed a listed hazardous waste in this case. The end usage of the hexachlorobenzene is irrelevant to the potential of the listed waste stream to cause harm. Therefore, any waste stream meeting the listing description contained in § 261.31 or § 261.32 is covered by the listing regardless of the end disposition of the material being produced.

*(2) Wastes from Chlorine Production via the Mercury Cell Process (EPA Hazardous Waste Nos. K071 and K106).*

Several commenters argued that data used by the Agency in support of the listings was outdated and therefore did not accurately reflect the hazardousness of the wastes listed. In reviewing the data submitted by the commenters, the Agency agrees that the data was old, and therefore has revised the background document to reflect the more recent information. The background document was revised in order to reflect new data on siting, production capacity, source of raw materials, concentration of mercury in these wastes and volume of wastes generated. The new data still indicates, however, that these wastes contain significant concentrations of mercury (a very toxic constituent), and are generated in substantial quantities. Furthermore, these wastes are reliably believed to have caused substantial damage in actual waste management practice, and therefore should be listed as hazardous wastes. A more detailed discussion of the comments received are available in the listing background document.

*E. Wastes for Which Comments Were Received Which Resulted in the Deletion of the Wastes from the Hazardous Waste List*

Two of the wastes listed in interim final form on July 16, 1980, were deleted from the list as a result of industry comment. Our basis for removing these wastes are discussed below. It must be emphasized, however, that it is still the responsibility of all generators of these wastes to determine whether they exhibit any of the characteristics of hazardous waste in Subpart C of Part 261.

*(1) Emission control dust/sludge from the production of ferromanganese (EPA Hazardous Waste No. K092).*

The Ferroalloys Association submitted EP leachate analyses from these ferromanganese production wastes which indicate that the extracts from these wastes do not contain significant concentrations of either chromium or lead, the waste

constituents of concern. The Agency has, therefore, determined that emission control dust/sludge from ferromanganese production should not be listed as a hazardous waste.

*(2) Wastewater treatment sludges from the production of TiO<sub>2</sub> pigment using chromium-bearing ores by the chloride process (EPA Hazardous Waste No. K074).*

On October 30, 1980 (45 FR 72037), the Agency published as a final rule an amendment to § 261.32 which removed this waste stream from the list of hazardous wastes since it derives from a trivalent chromium-based process and contains trivalent chromium exclusively or nearly exclusively.

*F. Wastes for Which Comments were Received and a Final Determination was Deferred*

*(1) Emission control dust or sludge from ferrochrome and ferrochrome-silicon production (EPA Hazardous Waste Nos. K090 and K091).*

These wastes are presently excluded from Subtitle C coverage due to the mining waste exclusion contained in § 261.4. However, the Agency also has some substantive doubts about whether these waste streams should be listed.

The Ferroalloys Association submitted extensive data which indicates that the EP extract from these wastes contains insignificant concentrations of lead. The Agency has therefore determined that lead should be deleted as a toxic constituent of concern in these wastes. In this same set of comments, however, the concentration of total chromium in the extracts of many of the sampled wastes was well above the limit set in § 261.24 (5 mg/l). There is real uncertainty, however, as to the valence state of the chromium in these wastes. Since the Agency has indicated that hexavalent chromium is the species of regulatory concern (45 FR 72029, October 30, 1980), we believe that additional data is needed. The Ferroalloys Association has agreed to conduct a sampling and analysis effort to determine whether significant levels of total chromium, hexavalent chromium, and manganese appear in the extract from ferrochrome and ferrochromium-silicon wastes. Manganese is of concern because its presence can result in the oxidation of trivalent chromium. After this data is received, the Agency will make a final decision on whether to list these wastes. This decision is expected to be made in the Spring of 1981.

*(2) Wastes from Gray and Ductile Iron Foundries (proposed listings).*

Over the past eighteen months the Agency has proposed for listing a

number of wastes from both gray and ductile iron foundries, namely lead bearing wastewater treatment sludges from gray iron foundries, and emission control dust from gray and ductile iron foundry cupola furnaces (see discussion in 45 FR 47835, July 16, 1980). These wastes were proposed for listing since they were shown in certain cases to contain or release significant concentrations of the toxic metals lead or cadmium. However, as a result of industry comment, the Agency undertook further study of these wastes, beginning last summer, to determine their hazardousness. The report of this study is expected to be available for public comment in the near future. After evaluating this data and the public comments received, the Agency will consider the hazards posed by various wastes from foundry operations. We are, accordingly, deferring final action on these wastes. (All of these wastes are hazardous, of course, if they exhibit any of the characteristics of hazardous waste, and generators of these wastes are obligated to make this determination.)

(3) *Wastes From the Use and Manufacture of Paints (EPA Hazardous Waste Nos. F017, F018, K078, K079, K081, and K082).*

Many comments were received from various trade organizations and interested individuals, who objected to the listing of these paint wastes.

In general, most commenters criticized the waste listings as overly broad, resulting in regulation of both hazardous and non-hazardous paint wastes. In re-evaluating the data, the Agency agrees that further study of these wastes is needed before a final listing can be promulgated. We anticipate that our re-examination of paint wastes will be completed by the Spring of 1981. The Agency therefore has decided to suspend temporarily the interim final listings of these paint wastes. Paint wastes which exhibit any of the hazardous waste characteristics remain subject to Subtitle C controls.

*G. Response to Comments Criticising the Agency's Decision to Defer Temporarily Listings of Waste Streams*

*from the Woven Fabric Dyeing and Finishing Industry*

The Agency indicated in the preamble to the July 16, interim final regulations that it was deferring temporarily listing of wastewater treatment sludges from the woven fabric dyeing and finishing industry (45 FR at 47832-47833).

One commenter objected to this decision, arguing that the Agency had improperly relied on EP protocol test data to evaluate the migratory potential of organic contaminants in these wastes. The commenter further stated that there is no documentation for the Agency's determination that chromium (which had been cited as a waste constituent of concern) is used in the manufacturing process in insignificant amounts. The commenter also felt that data submitted by industry sufficiently supports listing of these wastes as hazardous.

The Agency agrees with the commenter that the EP test may not be an appropriate measure of the potential for migration of all organic contaminants. Therefore, in evaluating the potential mobility of organic contaminants in textile waste, the Agency did not nor will it rely on the EP test to determine the potential mobility of possible organic waste constituents. In evaluating all the data currently in its possession, the Agency believes that it does not have sufficient data to assess the potential hazard to human health and the environment that would be presented by these wastes if improperly managed. The Agency, however, is still very concerned with the potential hazards that may be presented by these wastes, and therefore still intends to study further the wastes generated by the textile industry, paying particular attention to the many toxic organic constituents used in the production process such as dyes and pigments derived from benzidine, *o*-dianisidine, *o*-tolidine, and 3,3'-dichlorobenzidine, as well as acrylonitrile, trichlorobenzene, bis-(2-ethyl hexylphthalate), flame retardants and other additives.

With respect to the commenter's concern as to the lack of documentation on the use of chromium compounds in the textiles industry, the Agency not

only was provided this information by industry, but possessed corroborating data in its own files. However, the Agency will reevaluate this information when further studying these wastes.

**III. Finalization of Appendix VII to Part 261**

Appendix VII to Part 261 sets forth the hazardous constituents for which each of the wastes in §§ 261.31 and 261.32 are listed. This appendix has been amended to reflect changes made in the underlying listings, and is being finalized in this revised form.

**IV. Economic, Environmental and Regulatory Impacts**

In accordance with Executive Order 11821, as amended by Executive Order 11949 and Executive Order 12044, EPA has prepared an Economic Impact Analysis of the hazardous waste program promulgated on May 19, 1980. The net effect of today's action reduces the overall cost, economic impact, and reporting and recording impact of EPA's hazardous waste management regulations, since the overall scope of Subtitle C jurisdiction is being reduced. Since this action will decrease the regulatory impact of the Subtitle C regulatory program, we have not prepared a new Economic Impact Analysis or Regulatory Analysis. The Agency has also voluntarily prepared an Environmental Impact Statement on the program under the National Environmental Policy Act, 42 U.S.C. 4321 et seq.

(Sec. 3001 of the Resource Conservation and Recovery Act)

Dated: January 13, 1981.

Douglas M. Costle,  
Administrator.

For the reasons and as set out in the preamble, 40 CFR Part 261 is amended as follows:

1. The authority citation for Part 261 reads as follows:

Authority: Secs. 1006, 2002(a), 3001, and 3002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912, 6921 and 6922).

2. Revise § 261.31 to read as follows:

**§ 261.31 Hazardous waste from nonspecific sources.**

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.	(I)
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine; and the still bottoms from the recovery of these solvents.	(I, T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum	(T)
F007	Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions).	(R, T)
F008	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges).	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions).	(R, T)
F010	Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat-treating quenching bath sludges).	(R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning).	(R, T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges).	(T)
F014	Cyanidation wastewater treatment tailing pond sediment from mineral metals recovery operations	(T)
F015	Spent cyanide bath solutions from mineral metals recovery operations	(R, T)

### 3. Revise § 261.32 to read as follows:

#### § 261.32 Hazardous waste from specific sources.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
<b>Wood Preservation:</b>		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	(T)
<b>Inorganic Pigments:</b>		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008	Oven residue from the production of chrome oxide green pigments	(T)
<b>Organic Chemicals:</b>		
K009	Distillation bottoms from the production of acetaldehyde from ethylene	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
K015	Still bottoms from the distillation of benzyl chloride	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)
K026	Stripping still tails from the production of methyl ethyl pyridines	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production	(T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	(R, T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)
K083	Distillation bottoms from aniline production	(T)
K103	Process residues from aniline extraction from the production of aniline	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
<b>Inorganic Chemicals:</b>		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production	(T)
<b>Pesticides:</b>		
K031	By-product salts generated in the production of MSMA and cacodylic acid	(T)
K032	Wastewater treatment sludge from the production of chlordane	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	(T)
K035	Wastewater treatment sludges generated in the production of creosote	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton	(T)
K037	Wastewater treatment sludges from the production of disulfoton	(T)
K038	Wastewater from the washing and stripping of phosphate production	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phosphate	(T)
K040	Wastewater treatment sludge from the production of phosphate	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
K041	Wastewater treatment sludge from the production of toxaphene	(T)
K098	Untreated process wastewater from the production of toxaphene	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D	(T)
K099	Untreated wastewater from the production of 2,4-D	(T)
<b>Explosives:</b>		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives	(R)
K045	Spent carbon from the treatment of wastewater containing explosives	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds	(T)
K047	Pink/red water from TNT operations	(R)
<b>Petroleum Refining:</b>		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry	(T)
K049	Slip oil emulsion solids from the petroleum refining industry	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)
K051	API separator sludge from the petroleum refining industry	(T)
K052	Tank bottoms (lead) from the petroleum refining industry	(T)
<b>Iron and Steel:</b>		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces	(T)
K062	Spent pickle liquor from steel finishing operations	(C, T)
<b>Primary Copper:</b>		
K064	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production	(T)
<b>Primary Lead:</b>		
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities	(T)
<b>Primary Zinc:</b>		
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production	(T)
K067	Electrolytic anode slimes/sludges from primary zinc production	(T)
K068	Cadmium plant leachate residue (iron oxide) from primary zinc production	(T)
<b>Secondary Lead:</b>		
K069	Emission control dust/sludge from secondary lead smelting	(T)
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting	(T)
<b>Veterinary Pharmaceuticals:</b>		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
<b>Ink Formulation:</b>		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, dyes, soaps, and stabilizers containing chromium and lead	(T)
<b>Coking:</b>		
K060	Ammonia still lime sludge from coking operations	(T)
K087	Decanter tank tar sludge from coking operations	(T)

Part 261, Appendix [Amended]

4. Revise Appendix VII to Part 261 to read as follows:

Appendix VII—Basis for Listing Hazardous Waste

EPA hazardous waste No.	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F014	Cyanide (complexed).
F015	Cyanide (salts).
F019	Hexavalent chromium, cyanide (complexed).
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, cresosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.

Appendix VII—Basis for Listing Hazardous Waste—Continued

EPA hazardous waste No.	Hazardous constituents for which listed
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.
K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014	Acetonitrile, acrylamide.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrifluoride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.

Appendix VII—Basis for Listing Hazardous Waste—Continued

EPA hazardous waste No.	Hazardous constituents for which listed
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.
K035	Cresosote, chrysene, naphthalene, fluoranthene, benzo(b) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphoro-thioic acid esters.
K037	Toluene, phosphorodithioic and phosphoro-thioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphoro-thioic acid esters.
K039	Phosphorodithioic and phosphoro-thioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphoro-thioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.
K045	N.A.
K046	Lead.

**Appendix VII—Basis for Listing Hazardous Waste—Continued**

EPA hazardous waste No.	Hazardous constituents for which listed
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.
K062	Hexavalent chromium, lead.
K064	Lead, cadmium.
K065	Lead, cadmium.
K066	Lead, cadmium.
K067	Lead, cadmium.
K068	Lead, cadmium.
K069	Hexavalent chromium, lead, cadmium.
K071	Mercury.
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084	Arsenic.
K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene.
K093	Phthalic anhydride, maleic anhydride.
K094	Phthalic anhydride.
K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097	Chlordane, heptachlor.
K098	Toxaphene.
K099	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100	Hexavalent chromium, lead, cadmium.
K101	Arsenic.
K102	Arsenic.
K103	Aniline, nitrobenzene, phenylenediamine.
K104	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106	Mercury.

N.A.—Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

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