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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 268 and 271

[EPA # 530-Z-96-002; FRL-5560-1]
RIN 2050-AD38

Emergency Revision of the Land Disposal Restrictions (LDR) Phase III Treatment Standards for Listed Hazardous Wastes From Carbamate Production

AGENCY: Environmental Protection Agency (EPA, the Agency).

ACTION: Immediate final rule.

SUMMARY: On April 8, 1996, EPA published treatment standards (the "Phase III" final rule) for a number of hazardous wastes associated with the production of carbamate pesticides ("carbamate wastes") (61 FR 15566, April 8, 1996). The treatment standards were expressed as levels of chemical constituents that had to be measured in treatment residues before land disposal. They became effective July 8, 1996.

The Agency recently has become aware, however, of a serious analytic monitoring problem associated with the carbamate constituent treatment standards. Laboratory standards (chemicals used to calibrate laboratory instruments) do not exist for every carbamate constituent. Since commercial laboratories currently are unable to analyze all of the carbamate waste constituents, treatment facilities cannot certify that the LDR treatment standards have been achieved. Today's final rule revises the carbamate waste treatment standards for one year from the date of publication by allowing carbamate wastes to be treated either by any technology which achieves the constituent concentration levels promulgated in the Phase III rule, or by treatment technologies specified in this final rule as alternative treatment standards. This rule also suspends the requirement to treat carbamate waste constituents when they are expected to be present in ignitable, corrosive, reactive or toxic hazardous wastes as "underlying hazardous constituents."

The Agency believes that these temporary alternative treatment standards will assure that carbamate wastes are adequately treated prior to land disposal, while providing time for analytic chemical standards to be developed. At the end of the year EPA expects that laboratories will be able to perform the analyses necessary to measure compliance with treatment levels. At that time, therefore, the LDR treatment standards for carbamate wastes will revert to those originally promulgated in the Phase III rule.

EFFECTIVE DATE: August 26, 1996.

ADDRESSES: Supporting materials are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA. The Docket Identification Number is F-96-P32F-FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials by calling (703) 603-9230. The public may copy a maximum of 100 pages from any regulatory document at no cost. Additional copies cost $0.15 per page.

FOR FURTHER INFORMATION CONTACT: For general information contact the RCRA Hotline at 800-424-9346 (toll-free) or 703-412-9810 locally. For technical information on the carbamate treatment standards, contact Shaun McGarvey in the Office of Solid Waste, phone 703-308-8603. For specific information about this rule, contact Rhonda Craig, phone 703-308-8771.

>>>> The preamble has not been included in this file. <<<<

For the reasons set forth in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 268--LAND DISPOSAL RESTRICTIONS

1. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

Subpart D--Treatment Standards

2. Section 268.40 is amended by adding paragraph (g) and by revising in the table "Treatment Standards for Hazardous Wastes" the entries for K156-K161, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; to read as follows:

§ 268.40 Applicability of treatment standards.

* * * * *

(g) Between August 26, 1996 and August 26, 1997 the treatment standards for the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156-K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this section,

or by treating the waste by the following technologies: combustion, as defined by the technolgy code CMBST at § 268.42 Table 1, for nonwastewaters; and, biodegradation as definded by the technolgy code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technolgy code CMBST at § 268.42 Table 1, for wastewaters.

TREATMENT STANDARDS FOR HAZARDOUS WASTES
[Note: NA means not applicable]

Waste code	Waste description and treatment/regulatory subcategory[1]	Regulated hazardous constituent — Common Name	CAS[2] No.	Wastewaters — Concentration in mg/l[3]; or technology code [4]	Nonwastewaters — Concentration in mg/kg[5] unless noted as "mg/l TCLP" or technology code
*	* *	*	*		
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes[10].	Acetonitrile	75-05-8	5.6	1.8
		Acetophenone	96-86-2	0.010	9.7
		Aniline	62-53-3	0.81	14
		Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10
		Carbaryl	63-25-2	0.006	0.14
		Carbenzadim	10605-21-7	0.056	1.4
		Carbofuran	1563-66-2	0.006	0.14
		Carbosulfan	55285-14-8	0.028	1.4
		Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0

		Methomyl	16752-77-5	0.028	0.14
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyridine	110-86-1	0.014	16
		Toluene	108-88-3	0.080	10
		Triethylamine	121-44-8	0.081	1.5
K157	Wastewaters (including scrubber waters, condenser and separation waters) from the production of carbamates and carbamoyl oximes[10].	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		Methomyl	16752-77-5	0.028	0.14
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		o-Phenylenediamine	95-54-5	0.056	5.6
		Pyridine	110-86-1	0.014	16
		Triethylamine	121-44-8	0.081	1.5
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes[10].	Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10
		Carbenzadim	10605-21-7	0.056	1.4
		Carbofuran	1563-66-2	0.006	0.14
		Carbosulfan	55285-14-8	0.028	1.4

		Chloroform	67-66-3	0.046	6.0
		Methylene chloride	75-09-2	0.089	30
		Phenol	108-95-2	0.039	6.2
K159	Organics from the treatment of thiocarbamate wastes[10]	Benzene	71-43-2	0.14	10
		Butylate	2008-41-5	0.003	1.5
		EPTC (Eptam)	759-94-4	0.003	1.4
		Molinate	2212-67-1	0.003	1.4
		Pebulate	1114-71-2	0.003	1.4
		Vernolate	1929-77-7	0.003	1.4
K160	Solids (including filter wastes, separation solids, and spent catalysts) from the production of thiocarabamates and solids from the treatment of thiocarbamate wastes[10].	Butylate	2008-41-5	0.003	1.5
		EPTC (Eptam)	759-94-4	0.003	1.4
		Molinate	2212-67-1	0.003	1.4
		Pebulate	1114-71-2	0.003	1.4
		Toluene	108-88-3	0.080	10
		Vernolate	1929-77-7	0.003	1.4
K161	Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts[10].	Antimony	7440-36-0	1.9	2.1 mg/l TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP

		Dithiocarbamates (total)	137-30-4	0.028	28
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Selenium	7782-49-2	0.82	0.16 mg/l TCLP
*	*	*	*	*	*
P127	Carbofuran [10]	Carbofuran	1563-66-2	0.006	0.14
P128	Mexacarbate [10]	Mexacarbate	315-18-4	0.056	1.4
P185	Tirpate [10]	Tirpate	26419-73-8	0.056	0.28
P188	Physostigmine salicylate [10]	Physostigmine salicylate	57-64-7	0.056	1.4
P189	Carbosulfan [10]	Carbosulfan	55285-14-8	0.028	1.4
P190	Metolcarb [10]	Metolcarb	1129-41-5	0.056	1.4
P191	Dimetilan [10]	Dimetilan	644-64-4	0.056	1.4
P192	Isolan [10]	Isolan	119-38-0	0.056	1.4
P194	Oxamyl [10]	Oxamyl	23135-22-0	0.056	0.28
P196	Manganese dimethyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
P197	Formparanate [10]	Formparanate	17702-57-7	0.056	1.4
P198	Formetanate hydrochloride [10]	Formetanate hydrochloride	23422-53-9	0.056	1.4
P199	Methiocarb [10]	Methiocarb	2032-65-7	0.056	1.4
P201	Promecarb [10]	Promecarb	2631-37-0	0.056	1.4
P202	m-Cumenyl methylcarbamate [10]	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4

P203	Aldicarb sulfone[10]	Aldicarb sulfone	1646-88-4	0.056	0.28
P204	Physostigmine[10]	Physostigmine	57-47-6	0.056	1.4
P205	Ziram[10]	Dithiocarbamates (total)	NA	0.028	28
	* *	* *	*	*	
U271	Benomyl[10]	Benomyl	17804-35-2	0.056	1.4
U277	Sulfallate[10]	Dithiocarbamates (total)	NA	0.028	28
U278	Bendiocarb[10]	Bendiocarb	22781-23-3	0.056	1.4
U279	Carbaryl[10]	Carbaryl	63-25-2	0.006	0.14
U280	Barban[10]	Barban	101-27-9	0.056	1.4
	* *	* *	*	*	
U364	Bendiocarb phenol[10]	Bendiocarb phenol	22961-82-6	0.056	1.4
U365	Molinate[10]	Molinate	2212-67-1	0.042	1.4
U366	Dazomet[10]	Dithiocarbamates (total)	NA	0.028	28
U367	Carbofuran phenol[10]	Carbofuran phenol	1563-38-8	0.056	1.4
U372	Carbendazim[10]	Carbendazim	10605-21-7	0.056	1.4
U373	Propham [10]	Propham	122-42-9	0.056	1.4
U375	3-Iodo-2-propynyl n-butylcarbamate[10]	3-Iodo-2-propynyl n-butylcarbamate	55406-53-6	0.056	1.4
U376	Selenium, tetrakis (dimethyldithiocarbamate) [10]	Dithiocarbamates (total)	NA	0.028	28
		Selenium	7782-49-2	0.82	0.16 mg/l TCLP
U377	Potassium n-methyldithiocarbamate[10]	Dithiocarbamates (total)	NA	0.028	28

U378	Potassium n-hydroxymethyl-n-methyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U379	Sodium dibutyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U381	Sodium diethyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U382	Sodium dimethyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U383	Potassium dimethyl dithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U384	Metam Sodium [10]	Dithiocarbamates (total)	NA	0.028	28
U385	Vernolate [10]	Vernolate	1929-77-7	0.042	1.4
U386	Cycloate [10]	Cycloate	1134-23-2	0.042	1.4
U387	Prosulfocarb [10]	Prosulfocarb	52888-80-9	0.042	1.4
U389	Triallate [10]	Triallate	2303-17-5	0.042	1.4
U390	EPTC [10]	EPTC	759-94-4	0.042	1.4
U391	Pebulate [10]	Pebulate	1114-71-2	0.042	1.4
U392	Butylate [10]	Butylate	2008-41-5	0.042	1.4
U393	Copper dimethyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
U394	A2213 [10]	A2213	30558-43-1	0.042	1.4
U395	Diethylene glycol, dicarbamate [10]	Diethylene glycol, dicarbamate	5952-26-1	0.056	1.4
U396	Ferbam [10]	Dithiocarbamates (total)	NA	0.028	28
U400	Bis(pentamethylene)thiuram tetrasulfide [10]	Dithiocarbamates (total)	NA	0.028	28
U401	Tetramethyl thiuram monosulfide [10]	Dithiocarbamates (total)	NA	0.028	28
U402	Tetrabutylthiuram disulfide [10]	Dithiocarbamates (total)	NA	0.028	28
U403	Disulfiram [10]	Dithiocarbamates (total)	NA	0.028	28
U404	Triethylamine [10]	Triethylamine	101-44-8	0.081	1.5
U407	Ethyl Ziram [10]	Dithiocarbamates (total)	NA	0.028	28

U409	Thiophanate-methyl[10]	Thiophanate-methyl	23564-05-8	0.056	1.4
U410	Thiodicarb[10]	Thiodicarb	59669-26-0	0.019	1.4
U411	Propoxur[10]	Propoxur	114-26-1	0.056	1.4

Notes to the Table:

[1] The waste descriptions provided in this table do not replace waste descriptions in 40 CFR part 261. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.
[2] CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.
[3] Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.
[4] All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in 40 CFR 268.42 Table 1--Technology Codes and Descriptions of Technology-Based Standards.
[5] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR Part 264, Subpart O, or Part 265, Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in 40 CFR 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.

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[10] Between August 26, 1996 and August 27, 1997, the treatment standard for this waste may be satisfied by either meeting the constituent concentrations if this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at § 268.42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at § 268.42 Table 1, for wastewaters.

4. In § 268.48, the table in paragraph (a) is amended by adding footnote number "[6]" in column one, under the heading Regulated Constituents/Common Name, under I. Organic constituents, after the following chemical names: "2213"; "Aldicarb sulfone"; "Barban"; "Bendiocarb"; "Bendiocarb phenol"; "Benomyl"; "Butylate"; "Carbaryl"; "Carbenzadim"; "Carbofuran"; "Carbofuran phenol"; "Carbosulfan"; "m-Cumenyl methylcarbamate"; "Cycloate"; "Diethylene glycol, dicarbamate"; "Dimetilan"; "Dithiocarbamates (total)"; "EPTC"; "Formetanate hydrochloride"; "Formparanate"; "3-Iodo-2-propynyl n-butylcarbamate"; "Isolan"; "Methiocarb"; "Methomyl"; "Metolcarb"; "Mexacarbate"; "Molinate"; "Oxamyl"; "Pebulate"; "o-Phenylenediamine"; "Physostigmine"; "Physostigmine salicylate"; "Promecarb"; "Propham"; "Propoxur"; "Prosulfocarb"; "Thiodicarb"; "Thiophanate-methyl"; "Tirpate"; "Triallate"; "Triethylamine"; and, "Vernolate"; and adding footnote [6] at the end of the table to read as follows:

§ 268.48 Universal treatment standards.

(a) * * *

[6] Between August 26, 1996 and August 26, 1997, these constituents are not underlying hazardous constituents as defined at § 268.2(i).

>>>> Part 271 has not been included because it is not required as part of a State's Hazardous Waste
Program. <<<<

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