

TABLE IV-1.—PROPOSED SECTION 261.32(c)(1) MASS LOADING LIMITS FOR K181 NONWASTEWATERS

Constituent	Chemical abstracts No.	Mass levels (kg/yr)
Aniline	62-53-3	9,300
o-Anisidine	90-04-0	110
4-Chloroaniline	106-47-8	4,800
p-Cresidine	120-71-8	660
2,4-Dimethylaniline	95-68-1	100
1,2-Phenylenediamine	95-54-5	710
1,3-Phenylenediamine	108-45-2	1,200
Toluene-2,4-diamine	95-80-7	0.99

TABLE IV-2.—PROPOSED SECTION 261.32(c)(2) MASS-LOADING LIMIT FOR CONDITIONAL EXEMPTION TO K181 FOR NONWASTEWATERS DISPOSED OF IN LANDFILL CELLS SUBJECT TO DESIGN REQUIREMENTS

Constituent	Chemical abstracts No.	Mass levels (kg/yr)
Toluene-2,4-diamine	95-80-7	140

1. Landfill Scenarios Underlying Listing Loading Limits

Table III-2 sets out the loading limits we calculated for several landfill liner scenarios representing decreasing infiltration rates: No liner (NL), clay liner (CL), and a composite synthetic/clay liner (SL). These results reflect a broad spectrum of potential Subtitle D landfills that might receive nonwastewaters. However, we based the listing levels on the two scenarios we believe are most applicable. We are proposing to use the modeling results for a clay-lined landfill (CL scenario) as the basic loading levels for dyes and/or pigments production nonwastewaters in Table IV-1. As discussed in section 2 below, we are proposing to use the results for the composite liner modeling (SL scenario) as the basis for a conditional exemption from the listing to set the loading limit in Table IV-2 that would apply to wastes that are managed in landfills that are equipped with a minimum of a composite liner system.

We found that management in an offsite municipal solid waste landfill was a plausible management practice for nonwastewaters (see section III.F.2). The regulations governing municipal landfills require a composite liner design (or a strict performance standard; see 40 CFR 258.40), but this requirement does not apply to existing units (existing units are municipal landfill cells that accepted waste as of the dates specified in § 258.1(e), generally October 9, 1993). Most key parts of the MSWLF regulations codified in 40 CFR part 258 apply to existing units. Some of these regulations (notably the groundwater monitoring and corrective measures regulations at § 258.50 through § 258.58) probably have encouraged facilities to

close unlined units because of the long-term liability of adverse groundwater impact.⁴¹ We believe that it is likely that a landfill currently receiving these industrial wastes would have at least a clay liner.⁴² In fact, an industry association presented detailed information in comments on the 1999 proposed listing for dye and pigment wastes that showed that landfills receiving these wastes are reported to have liners.⁴³ Therefore, we are proposing that the mass loading limits from the clay-lined results shown in Table IV-1 define the hazardous mass loadings for these dye and/or pigment wastes (in § 261.32(c)(1)). Nevertheless, because there may be unlined MSWLFs that might be used for these wastes, we are soliciting comment on whether the listing (and levels in § 261.32(c)(1)) should be conditioned on the wastes being placed in a landfill with a minimum of a clay liner. We may consider this option, for example, if we

⁴¹ See "Waste Age," Volume 30, p. 64; July 1999. Also, the number of MSWLFs operating has decreased from 7,683 in 1986 to 3,581 in 1995 and to about 2,300 in 2000; See EPA's updated lists of MSWLFs (EPA530-R-96-006) and at <http://www.epa.gov/epaoswer/non-hw/muncpl/longdesc/4-8longdesc.htm>.

⁴² While our data indicate that dyes and/or pigments manufacturers do not appear to currently use nonmunicipal (i.e., "industrial") Subtitle D landfills, we believe that this type of landfill is also likely to be lined. Commercial offsite landfills are subject to considerable regulations by States, including liner requirements. See the report by ASTSWMO, "Non-Municipal, Subtitle D Waste Survey," March 1996 and EPA's report "List of Industrial Waste Landfills and Construction and Demolition Waste Landfills," September 30, 1994 (PB'95-208914, 530-R-95-019), <http://www.epa.gov/epaoswer/hazwaste/sqg/list/lfillpdf.pdf>.

⁴³ See comments by Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers, Attachment A, October 21, 1999, placed in the docket for today's proposal.

receive data that shows dye and pigment wastes are being disposed of in unlined landfills.

2. Conditional Exemption for Certain Landfilled Wastes

We are also proposing that wastes that otherwise meet the K181 listing description could be managed as nonhazardous so long as both of the following conditions are met: (1) The nonwastewaters do not contain an annual mass loading of toluene-2,4-diamine that is equal to or greater than 140 kg/yr, and (2) the nonwastewaters are disposed in a Subtitle D landfill cell subject to the design criteria in § 258.40 or in a Subtitle C landfill cell subject to the design criteria in § 264.301 or § 265.301. We are proposing this exemption because our modeling indicates that management in landfills that comply with or exceed these design standards should not pose a risk to human health and the environment (so long as the waste does not exceed the § 261.32(c)(2) listing levels for toluene-2,4-diamine).

As previously discussed in IV.A.1, the § 261.32(c)(1) listing levels reflect our risk assessment modeling results for a clay-lined landfill. Wastes with mass loadings above the § 261.32(c)(1) listing levels pose risk to human health when placed in a landfill that is only lined with clay because of the modeled mobility of the K181 constituents through a clay liner into the subsurface and subsequent movement through an aquifer used for domestic consumption. Many landfills, however, have been designed with more protective liner systems than a simple clay liner. The § 258.40 landfill liner requirements provide significantly more protection against contaminant migration into