

TABLE C-5.—REGULATORY LEVELS FOR TOXICITY CHARACTERISTIC CONTAMINANTS

Contaminant	Apportioned chronic toxicity reference level (mg/l) ¹	D/A factor ²	Calculated level (mg/l) ³	Quantitation limit (mg/l) ⁴	Regulatory level (mg/l) ⁵
Acrylonitrile	0.002	14.4	0.029	5.0	(5.0)
Arsenic	0.05	100.0	5.0	0.025	5.0
Barium	1.0	100.0	100	0.05	100
Benzene	0.005	14.4	0.072	0.05	0.07
Bis(2-chloroethyl)ether	0.0003	14.4	0.004	0.05	(0.05)
Cadmium	0.01	100.0	1.0	0.05	1.0
Carbon disulfide	1.0	14.4	14.4	5.0	14.4
Carbon tetrachloride	0.005	14.4	0.072	0.05	0.07
Chlordane	0.002	14.4	0.029	0.0025	0.03
Chlorobenzene	0.1	14.4	1.44	0.05	1.4
Chloroform	0.005	14.4	0.072	0.05	0.07
Chromium	0.05	100.0	5.0	0.1	5.0
o-Cresol	0.7	14.4	10.08	0.5	10.0
m-Cresol	0.7	14.4	10.08	0.5	10.0
p-Cresol	0.7	14.4	10.08	0.5	10.0
2,4-D	0.1	14.4	1.44	0.025	1.4
1,2-Dichlorobenzene	0.3	14.4	4.32	0.125	4.3
1,4-Dichlorobenzene	0.75	14.4	10.8	0.125	10.8
1,2-Dichloroethane	0.005	75.0	0.40	0.05	0.40
1,1-Dichloroethylene	0.007	14.4	0.1008	0.05	0.1
2,4-Dinitrotoluene	0.001	14.4	0.0144	0.125	(0.13)
Endrin	0.0002	14.4	0.0029	0.0005	0.003
Heptachlor (and hydroxide)	0.0001	14.4	0.0014	0.0005	0.001
Hexachlorobenzene	0.0002	14.4	0.0029	0.125	(0.13)
Hexachlorobutadiene	0.05	14.4	0.72	0.125	0.72
Hexachloroethane	0.3	14.4	4.32	0.125	4.3
Isobutanol	2.5	14.4	36	5.0	36
Lead	0.05	100.0	5.0	0.4	5.0
Lindane	0.004	14.4	0.0576	0.0005	0.06
Mercury	0.002	100.0	0.2	0.002	0.2
Methoxychlor	0.1	14.4	1.44	0.0025	1.4
Methylene chloride	0.8	14.4	8.64	0.125	8.6
Methyl ethyl ketone	0.5	14.4	7.2	0.05	7.26
Nitrobenzene	0.004	14.4	0.0576	0.125	(0.13)
Pentachlorophenol	0.25	14.4	3.6	0.05	3.6
Phenol	1.0	14.4	14.4	0.125	14.4
Pyridine	0.03	14.4	0.432	5.0	(5.0)
Selenium	0.01	100.0	1.0	0.05	1.0
Silver	0.05	100.0	5.0	0.05	5.0
1,1,1,2-Tetrachloroethane	0.7	14.4	10.08	0.05	10.0
1,1,2,2-Tetrachloroethane	0.02	65.0	1.3	0.05	1.3
Tetrachloroethylene	0.007	14.4	0.1008	0.05	0.1
2,3,4,6-Tetrachlorophenol	0.10	14.4	1.44	0.5	1.5
Toluene	1.0	14.4	14.4	0.05	14.4
Toxaphene	0.005	14.4	0.072	0.025	0.07
1,1,1-Trichloroethane	0.2	150.0	30	0.05	30
1,1,2-Trichloroethane	0.06	20.0	1.2	0.05	1.2
Trichloroethylene	0.005	14.4	0.072	0.05	0.07
2,4,5-Trichlorophenol	0.4	14.4	5.76	0.25	5.8
2,4,6-Trichlorophenol	0.02	14.4	0.288	0.25	0.3
2,4,5-TP (Silvex)	0.01	14.4	0.144	0.025	0.14
Vinyl chloride	0.001	14.4	0.0144	0.05	(0.05)

¹ See Table C-3.² See Table C-4.³ Apportioned Chronic Toxicity Reference Level multiplied by Dilution/Attenuation Factor.⁴ See Table C-2.⁵ If the quantitation limit is greater than the calculated level, the quantitation limit becomes the (technology based) regulatory level (indicated by level in parenthesis).

D. Development and Evaluation of the TCLP

1. Introduction

This Section provides detailed information on how the TCLP was developed and evaluated. Still more detailed information regarding the TCLP is available in a Background Document that EPA has prepared for the TCLP (Ref. 33).

2. Experimental Design

EPA, through an interagency agreement with the U.S. Department of

Energy's Oak Ridge National Laboratory (ORNL), has conducted a research program designed to develop an improved leaching test, the TCLP. The TCLP development program was split up into three phases. Phases I and II, and part of Phase III have been completed. Phase I consisted of an initial data gathering effort in which a number of wastes were leached with a leachate derived from municipal refuse. The wastes were also extracted with a variety of laboratory leaching media and contact procedures. Phase I was designed to narrow the universe of

potential candidate leaching procedures. In Phase II, additional wastes were leached and the candidate procedures refined into the draft TCLP. During this phase of testing, public assistance and review of the draft was solicited.

The overall approach employed in Phase I was as follows:

a. Large-scale field lysimeters were filled with domestic and commercial refuse and used to generate a municipal waste leachate (MWL).

b. The MWL was used to leach four industrial solid wastes in large columns.