

Waste disposal

Information Sheet

Current criteria for the classification of waste—including Industrial and Commercial Waste (Listed) and Waste Soil

Issued March 2010

EPA 889/10: This information sheet provides the current criteria for the classification of waste as they appear on EPA licences, including Industrial and Commercial Waste (Listed) and Waste Soil. These are applied at waste depots to define disposal criteria, and to form part of the criteria to assess risks and determinations made for materials proposed for reuse as Waste Derived Fill¹. The concentrations of chemical substances that define chemical criteria for Intermediate and Low-level contaminated waste will apply until the draft publication Guideline for solid waste: criteria for assessment, classification and disposal of waste² is finalised.

The criteria for Waste Fill however, will remain as defined in the Environment Protection Regulations 2009, as reflected in this Information Sheet.

Intermediate and Low-level Contaminated Waste Criteria

Landfill licenses may contain additional notations for minimum suites of chemicals for analysis of specific wastes for disposal.

Table 1 Criteria for the classification of waste

Chemical Substance	Intermediate		Low-level contaminated	
	Concentration in mg/kg (dry weight)	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997	Concentration in mg/kg (dry weight)	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997
Aldrin + dieldrin (total)	<2	#	<50	0.1
Arsenic	<200	5	<750	5
Barium	–	–	–	100
Benzo(a)pyrene	<2	#	<5	0.001
Beryllium	<40	1	<150	1
Cadmium	<30	0.5	<60	0.5
Chlordane	<2	#	<50	0.6

¹ Refer to <www.epa.sa.gov.au/environmental_info/waste/solid_waste/waste_derived_fill/articles/waste_derived_fill>

² Refer to <www.epa.sa.gov.au/environmental_info/waste/solid_waste/landfill>.

Current criteria for classification of waste

Chemical Substance	Intermediate		Low-level contaminated	
	Concentration in mg/kg (dry weight)	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997	Concentration in mg/kg (dry weight))	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997
Chromium Total	–	–	–	20
Chromium (III)	<12%	#	<30%	#
Chromium (VI)	<200	5	<750	5
Cobalt	<170	#	<1,000	#
Copper	<2,000	10	<7,500	10
Cyanides (total)	<1,000	10	<3,500	10
DDT	<2	#	<50	0.3
Heptachlor	<2	#	<50	0.3
Iron	–	–	–	100
Lead	<1,200	5	<5,000	5
Manganese	<6,000	50	<10,000	50
Mercury	<30	0.1	<110	0.1
Methyl Mercury	<20	#	<75	#
Nickel	<600	2	<3,000	2
Phenolic compounds (total)	<17,000	#	<50,000	14.4
Polychlorinated biphenyls (PCBs)	<2	#	<50	#
Polycyclic aromatic hydrocarbons (PAH) (total)	<40	#	<200	#
Silver	–	–	–	5
Total Petroleum Hydrocarbons (TPH) C ₆ –C ₉	<100	#	<1,000	#
TPH > C ₉	<1,000	#	<10,000	#
Zinc	<14,000	250	<50,000	250
				Method of analysis AS4439.2–1997
Benzene	<5	#	<15	1
Ethylbenzene	<100	#	<1,000	30
Tetrachloroethylene	<14	#	<25.2	0.7

Chemical Substance	Intermediate		Low-level contaminated	
	Concentration in mg/kg (dry weight)	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997	Concentration in mg/kg (dry weight)	Maximum leachate concentrations in mg/L Method of analysis AS4439.3–1997
Toluene	<50	#	<500	14.4
Xylene (total)	<180	#	<1,800	50

Notes:

- 1 The assessment of the chemical analysis carried out on samples of the waste may include scientifically valid statistical analysis (for total concentrations mg/kg) to justify classification of the waste in accordance with the values listed in this table.
- 2 '#' indicates that leachate testing for that chemical substance is not required provided that the concentration of that chemical substance in mg/kg (dry weight) does not exceed the value specified for that category of waste.
- 3 '<' = 'less than'.

Waste Fill (as defined in Part 1 the *Environment Protection Regulations 2009*)

Waste fill means waste consisting of clay, concrete, rock, sand, soil or other inert mineralogical matter in pieces not exceeding 100 millimetres in length and containing chemical substances in concentrations (calculated in a manner determined by the Authority) less than the concentrations for those substances set out in the following table (but does not include waste consisting of or containing asbestos or bitumen):

Table 2 Waste fill chemical criteria

Waste fill criteria ³			
Chemical substance	Maximum total dry weight chemical concentrations (mg/kg)	Chemical substance	Maximum total dry weight chemical concentrations (mg/kg)
Aldrin/Dieldrin (total)	2	Ethylbenzene	3.1
Arsenic	20	Heptachlor	2
Barium	300	Lead	300
Benzene	1	Manganese	500
Benzo(a)pyrene	1	Mercury	1
Beryllium	20	Nickel	60

³ The assessment of the chemical analysis carried out on samples may include statistical analysis to justify classification of the waste derived fill in accordance with the values listed in this table.

Waste fill criteria			
Chemical substance	Maximum total dry weight chemical concentrations (mg/kg)	Chemical substance	Maximum total dry weight chemical concentrations (mg/kg)
Cadmium	3	Petroleum hydrocarbons TPH C6-C9 (total)	65
Chlordane	2	Petroleum hydrocarbons TPH >C9	1,000
Chromium (III)	400	Phenolic compounds (total)	0.5
Chromium (VI)	1	Polycyclic aromatic hydrocarbons (PAH) (total)	5
Cobalt	170	Polychlorinated biphenyls (PCBs)	2
Copper	60	Toluene	1.4
Cyanides (total)	500	Xylene (total)	14
DDT	2	Zinc	200

Further information

Legislation

Legislation may be viewed on <www.legislation.sa.gov.au>.

Copies of legislation are available for purchase from:

Service SA
EDS Centre
108 North Terrace
Adelaide SA 5000

Telephone: 13 23 24
Fax: (08) 8204 1909
Website: <shop.service.sa.gov.au>

For general information please contact:

Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Telephone: (08) 8204 2004
Facsimile: (08) 8124 4670
Freecall (country): 1800 623 445
Website: <www.epa.sa.gov.au>
Email: <epainfo@epa.sa.gov.au>