

# 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 Fill<sup>1</sup>. 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 waste<sup>2</sup> 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<br>Method of analysis AS4439.3–1997 | Concentration in mg/kg (dry weight) | Maximum leachate concentrations in mg/L<br>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   |

<sup>1</sup> Refer to <[www.epa.sa.gov.au/environmental\\_info/waste/solid\\_waste/waste\\_derived\\_fill/articles/waste\\_derived\\_fill](http://www.epa.sa.gov.au/environmental_info/waste/solid_waste/waste_derived_fill/articles/waste_derived_fill)>

<sup>2</sup> Refer to <[www.epa.sa.gov.au/environmental\\_info/waste/solid\\_waste/landfill](http://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<br>Method of analysis AS4439.3–1997 | Concentration in mg/kg (dry weight)) | Maximum leachate concentrations in mg/L<br>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 <sub>6</sub> –C <sub>9</sub> | <100                                | #   | <1,000                               | #   |
| TPH > C <sub>9</sub>  | <1,000                              | #   | <10,000                              | #   |
| Zinc  | <14,000                             | 250   | <50,000                              | 250   |
|   |                                     |   |                                      | <b>Method of analysis AS4439.2–1997</b>                                     |
| 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<br>Method of analysis AS4439.3–1997 | Concentration in mg/kg (dry weight) | Maximum leachate concentrations in mg/L<br>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 <sup>3</sup> |  |                    |  |
|----------------------------------|--|--------------------|--|
| 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   |

<sup>3</sup> 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](http://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](http://shop.service.sa.gov.au)>

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