

Notes on Site Analysis

WAC Test

This is a specific two-part leachate test (solid to liquid ratios of 8:1 and 2:1) to BSEN12457-3 that is a component part of the waste acceptance procedure. This test has been designed to mimic the action of rainfall upon the waste when in landfill and to establish the stability of certain metals and organic components of the waste. Currently a WAC test is a requirement for hazardous and inert waste streams, though certain types of inert waste may be exempt from this test [ref: The Landfill (England and Wales) Regulations] The levels of the components specified in the test must be below certain thresholds before the waste can be allowed into landfill.

Leachate is formed when water passes through the waste in the landfill site and becomes contaminated.

Watch out for elevated levels of Arsenic, Zinc and PAH – tips will have different levels they work to – try to ascertain what they are.

- BORON – hard almost colourless crystal that is used in hardening steel
- ARSENIC – toxic metalloid element used in transistors, lead based alloys and high temperature brasses
- ZINC – bluish white metallic element that is a constituent of several alloys and is used in die casting, galvanising metals and in battery electrodes. (galvanise = stimulate with electric current)
- PHEONAL – also called carboic acid – a white crystalline derivative of benzene, used as an antiseptic and disinfectant and in the manufacture of resins, explosives and pharmaceuticals. A compound attached to an aromatic hydrocarbon group and is found in coal tar and industrial processes.

- TPH – total petroleum hydrocarbons – oil grease mineral oil hydrocarbon oil
- PAH – polyaromatic hydrocarbons
- BTEX – Benzene toluene ethyl benzene and xylene which are volatile organic compounds. Long term exposure to Benzene can cause leukaemia. BTEX compounds are found near gas and petrol production sites.
- VOC – volatile organic components are emitted from certain solids or liquids as gases – can be found in paint wood stripper varnishes etc.
- SVOC – semi volatile organic compounds
- SIC – standard industrial classification
- ECOTOXIC – toxic to the environment
- PHYTOTOXIN – produced by a plant IE STRYCHINE
- ASBESTOS – harmful to health
- JAPANESE KNOTWEED – rampant ornamental plant

**CADMIUM LEAD AND
MERCURY ARE ALL
HEAVY METAL AND
ARE TOXIC TO
HUMANS**

Metals

- Arsenic (As)**
- Cadmium (Ca)**
- Total Chromium (Cr)**
- Copper (Cu)**
- Lead (Pb)**
- Nickel (Ni)**
- Mercury (Hg)**
- Zinc (Zn)**

**ICRCL TABLES HAVE
BEEN SUPERCEDED BY
SOIL GUIDELINE
VALUES’
DIFFERENT LANDFILL
SITES WORK TO
DIFFERENT LEVELS**