

TES Bretby is the UK's premier environmental testing laboratory producing high quality analytical data for more than 20 years. As a Mowlem plc business, we provide a comprehensive range of environmental analytical services to consulting, industrial and government clients situated within the UK, Europe and across many countries world-wide.

Our main business aim is to provide you with meaningful data, not just facile numbers.

Monitoring Trace Components in Landfill Gas

Over the last few years, the UK Environment Agency has been developing a series of Guidance Documents aimed at assisting Agency staff to monitor and regulate waste management facilities.

In order to assist it's staff in assessing the monitoring of Permitted and Licensed sites, the Agency has released a Draft Guidance Document (November 2002) on the Monitoring of Trace Components in Landfill Gas.

Trace Component Monitoring to:

- Complete Pollution Inventory
- Quantify total emissions
- Risk Assessments

Guidance Describes:

- Annual sampling
- Appropriate sampling points
- Data handling
- Detailed sampling methods
- Analytical techniques

Reports to the Agency

- Suggested report format
- **No limits specified**

Priority Trace Components

The Agency has identified the compounds found in landfill gas, which it considers to have a significant impact on either human health and/or odour generation:

Chloroethane, chloroethene (vinyl chloride), benzene, 2-butoxy ethanol, arsenic (as As), 1,1-dichloroethane, trichloroethene, tetrachloromethane, methanal (formaldehyde), hydrogen sulphide, 1,1-dichloroethene, 1,2-dichloroethene, carbon disulphide, methanethiol, butyric acid, ethanal (acetaldehyde), ethyl butyrate, 1-propanethiol, dimethyl disulphide, ethanethiol, 1-pentene, 1-butanethiol, dimethyl sulphide, 1,3-butadiene, furan, mercury (as Hg), PCDDs, PCDFs and carbon monoxide.

Traditional methods of sampling for trace gas analysis eg. tedlar bag are **not** acceptable under this guidance which specifies very specialised absorption tubes and analytical methods.

The EA Guidance gives details of a monitoring regime for the assessment and reporting by operators of the trace composition of the landfill gas, together with detailed methodologies for sampling and analysis.

To help our clients achieve the required monitoring, TES Bretby has constructed the



equipment and assembled the staff required to carry out the monitoring and has gained a track record of testing on a number of

different landfill sites. We have further developed and refined the sampling equipment described in the guidance document in order to make the sampling operation as **quick and efficient** as possible.

Reports

Clients are provided with a written report detailing the sampling event and the analytical results obtained. The information provided allows the operator to complete the Return to the Agency



Meeting Point Steve Shaw



Steve is our Senior Instrument Engineer and has over 30 years experience in the sampling and analysis of gases. He was given the task of interpreting the sampling requirements of the Agency Guidance and asked to construct a suitable sampling train. His previous site experience ensured his design was compact, robust, reliable and has already been used on

numerous monitoring projects.

CONTACT US

For further information about any of the issues raised in this bulletin or to discuss your analytical requirements please contact:

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