

## Air Quality & Odour Assessment

### Continuous Ambient Air Monitoring

REC owns and hires out state of the art air-conditioned, ambient air quality monitoring stations. They are equipped with rack-mounted analysers and sophisticated data logging equipment, including GSM modem links to allow remote data retrieval, calibration and system performance checks.

The monitoring stations can measure concentrations of the following pollutants:

- PM<sub>10</sub> using R & P TEOM instruments, measuring down to an LOD of 0.01µg/m<sup>3</sup>.
- Oxides of nitrogen and nitrogen dioxide using chemiluminescence analysers capable of measuring to an LOD of 1 ppb.
- Methane and total hydrocarbons using FIDs capable of measuring to an LOD of 30 ppb.
- Sulphur dioxide using UV/fluorescence analysers, capable of measuring to an LOD of 1 ppb.
- Hydrogen Sulphide analyser, utilising catalytic conversion to SO<sub>2</sub>, measuring to an LOD of 1 ppb.
- Carbon monoxide using GFC-IR analyser capable of measuring down to an LOD of 20 ppb.
- Ozone by U/V analyser measuring down to an LOD of 1 ppb.

The monitoring stations also record meteorological information such as, wind speed, wind direction, air temperature, atmospheric pressure, temperature, relative humidity, rainfall etc. This information is used in the modelling and interpretation of the data. Data recorded as 15-minute averages on a continuous basis can then be converted to the client's requirements e.g. 24 hour averages:

### Non-Continuous Ambient Air Monitoring

A range of non-continuous monitoring techniques augment REC's continuous monitoring capabilities, these include:

- High Volume PUF samplers to US EPA TO9 to determine dioxins & furans, PCBs and PAHs.
- Acid gases: HCl, HF, SO<sub>2</sub>, NO<sub>2</sub>.
- Collection of odour bag samples for subsequent olfactometric assessment.



- Speciated VOC monitoring including, BTEX compounds, chlorinated fluorocarbons, organo-sulphur compounds.
- Frisbee and directional dust deposit gauges to monitor dust deposition rates. These are used extensively to monitor dust deposition rates around site remediation projects.
- Total suspended particulate matter and a suite of heavy metals such as those normally determined in incinerator emissions i.e.: Cd, Tl, Hg, Sb, As, Pb, Cr, Cu, Co, Mn, Ni and V using high volume samplers at ng/m<sup>3</sup> concentrations as per US EPA IO2.
- Bio-aerosols - Total Bacteria, Gram Negative Bacteria, Total Fungi + Yeasts, Thermophilic Fungi, Penicillia, Aspergillus Fumigatus, Endotoxin, E.coli and Salmonella in the ambient air around landfills, waste handling and composting facilities.

### Other Associated Services

- H1 Assessments
- Dispersion Modelling to ADMS4
- DMRB Air Quality Assessments
- ADMS-Roads Assessments

# REC Office Locations

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REC Group Services include: ■ Geo-environmental Site Investigation & Risk Assessment, ■ Brownfield Site Remediation, ■ Ecological Surveys ■ Asbestos Surveys, Analysis & Clearance Certification ■ MCERTS accredited Stack Emission Monitoring ■ Air Quality & Odour Monitoring & Assessment ■ COSHH Monitoring Assessments ■ UKAS & MCERTS Accredited Laboratory Analysis

UK Offices in Manchester, Birmingham, Braintree, Fareham, Huddersfield, Newcastle, Port Talbot  
East Kilbride, Edinburgh, Dundee and N Ireland

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[www.recltd.co.uk](http://www.recltd.co.uk)