

Flux Chamber Sampling for VOCs

“Specialised Services Simplified.”

Leeder Consulting specialise in non-routine laboratory analysis. Independence and commitment to your project’s **“data quality objectives”** enables us to suggest innovative and cost effective solutions.

Assess exposure pathways for health risk assessment.

Develop & calibrate air quality models & health risk models.

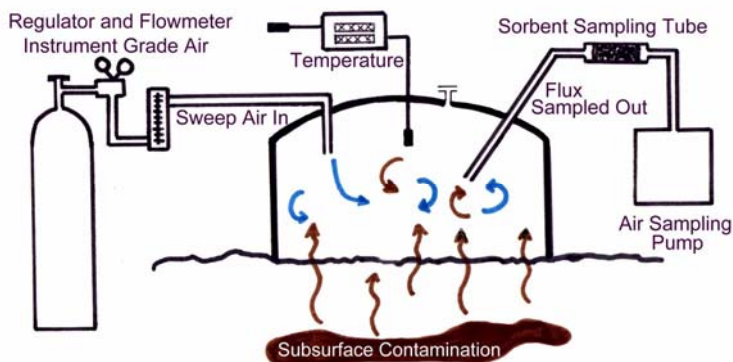
Flux Chambers are used to determine levels of volatile organic compounds emitted from land or liquid surfaces.

The Flux Chamber is set up to enclose a known surface area. Air is introduced to the chamber to mix with the emissions and transport them to the collection devices.

The Chamber is designed to create the best mixing and sampling conditions without altering the emission of gases at the surface. The samples collected are used to determine the actual flux of pollutants at the surface in $\mu\text{g} / \text{m}^2 / \text{min}$.



System Blanks and Calibrations prior to Sampling are critical in ensuring the chambers are operating correctly.



The Flux Chamber enables measurement of emission rates for a wide range of compounds, from a range of sources. These can include:

Contaminated Sites

Landfill Sites

Land Treatment

Water Treatment Ponds

Analysis of the sorbent sampling tubes for Volatile Organic Compounds by **Thermal Desorption** according to **US EPA TO-17** provides the lowest possible detection limits for VOCs. Samples are collected in duplicate, as “Distributed Volume Pairs”. This approach assists in validating the sampling procedures and adds another level of quality control.

References Kienbusch, M. 1986. Measurement of Gaseous Emissions Rates from Land Surfaces using an Emission Isolation Flux Chamber, User's Guide, EPA Users Guide, (EPA 600/8-86/008).

U.S. EPA 1989. Risk Assessment Guidance for Superfund, Vol I: Human Health Evaluation Manual, Part A, Interim Final, U.S. Environmental Protection Agency, Washington, D.C.(EPA/540/1-89/002).

Case Study Comparisons of Vapor Inhalation Risk Estimates: ASTM RBCA Model Predictions Vs Site Specific Soil Vapor Data. P.J McNeel & C Atwood ,Weiss Associates. V Dibley, Lawrence Livermore National Laboratory.

Leeder Consulting offer a range of specialised high-tech, non-routine and on-site services. Access to leading edge technology and expertise in Australia and overseas guarantees results when and where you require. To discuss your requirements or for more information call us now.



**LEEDER
CONSULTING**

Melbourne: Tel 03 9874 1988 Sydney: Tel 02 9959 2351 Adelaide: Tel 08 8410 7055 Brisbane: Tel 07 3899 2311