

Ambient air monitoring



AUSTRALIA

Trinity Consultants Australia provides ambient air monitoring for environmental assessments, compliance reporting, permit applications and several other purposes.

Our monitoring encompasses activities from short-term campaigns over a single day through to long-term and permanent air quality sampling – and a range of programs in between. We have experience with a broad range of target compounds, monitoring equipment and data modelling software.

Ambient air monitoring is undertaken by the expert team at Trinity for a variety of reasons, including to establish baseline conditions, determine trends over time, assess overall air quality compliance due to specific activities or events, and to provide data to assist in identifying air emission sources.

Our capabilities

Equipment and facilities

- Wide range of own sampling instrumentation and monitoring equipment
- Expert instrumentation calibration to ensure equipment precision and accuracy
- Purpose-built equipment preparation and sample recovery laboratory
- Wide network of additional instrument suppliers to service complex or rare monitoring requirements (or multiple projects simultaneously)

Ambient air monitoring

- Dust fallout deposition
- Directional dust
- Continuous fine ($PM_{2.5}$), (PM_{10}) and total particulates
- Filter-based reference monitoring of particulates
- Continuous monitoring of common gases
- Sorption tubes and canister sampling of organics
- Filter and cartridge sampling for dioxins, PAHs and heavy metals
- Ambient odour intensity surveys
- Weather monitoring
- Independent audit of air quality monitoring systems or equipment

Indoor air and occupational modelling

- Fine ($PM_{2.5}$), (PM_{10}) and total particulates
- Identification of odorous compounds and sources
- Sampling for mould and fungi
- Combustion gases (e.g. CO, CO₂, NO₂)
- Heavy metals (e.g. lead, arsenic)
- Volatile organic compounds (e.g. benzene, toluene, xylene)
- Aldehydes
- Air flow and ventilation

Source emission sampling

- Odour from stack, fugitive and area sources
- Velocity and gases
- Coordination of isokinetic sampling of aerosols and semi-volatiles
- Arranging laboratory analysis for chemical and physical properties
- See our stack testing fact sheet

Data analysis, interpretation and reports

- Diverse analytical methods to review and interpret data
- Software modelling to help simulate a wide range of scenarios
- Expertise to ensure the models draw relevant and meaningful conclusions
- Data validation and quality assurance
- Reporting to meet regulatory requirements





Target compounds

- Acid gases
- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Dioxins and furans (PCDD/PCDF)
- Formaldehyde
- Hydrogen sulphide
- Isocyanates
- Metals
- Nitrogen oxides (NO_x)
- Odours
- Polychlorinated biphenyls (PCBs)
- Pesticides
- Polynuclear aromatic hydrocarbons
- Semi-volatile organic compounds
- Sulphur oxides (SO_x)
- Suspended particulate matter (TSP, PM₁₀, PM_{2.5}, PM₁)
- Volatile organic compounds (VOCs)



Certifications and standards

- JAS/ANZ 3rd Party Certified by SCI Qual International (certification number 4277) for our Quality Management System, which is in conformance with ISO 9001:2015
- Level 3 Prequalification status with Queensland Government, PQC Registration Certificate Number 4663A
- Multiple staff who hold Certified Air Quality Professional (CAQP) certifications
- Source emission testing certified by the Australian National Association of Testing Authorities (NATA)

Our clients

- Multicom Resources (noise and particulate monitoring)
- Carabella Resources (noise and particulate monitoring)
- Gladstone Ports Corporation (particulate monitoring)
- Brookfield Multiplex (particulate monitoring)
- 7-Eleven (VOC monitoring)
- Woollam Constructions (vibration, noise and particulate monitoring)
- Sapar Landscape Supplies (dust monitoring)