

Welcome

To Daniel Hovell who has joined the staff. Daniel has recently completed his BE (Chemical) degree and is a significant addition to our business, both personally and professionally.

We are also pleased to welcome Bruce Graham, formerly of Opus Consultants, who has set up a new company, Graham Environmental Consulting Ltd. Bruce will be working in the area of air quality management, air consent applications, contaminated site investigations and occupational health and safety. It is a privilege to have this association with him and to be able to co-operate in our related enterprises. If you would like any more information on Bruce's Company please contact him on the number shown below.

Academically it is a significant year for the staff. James has completed his B.Sc in Environmental Science, Peter has completed his Certificate in Applied Science and Andrew his NZCE.

Sampling Methods

There is an increasing demand for sampling of organic vapours emitted during chemical processing. There are specific methods for individual organic compounds developed for occupational health requirements, but these are not necessarily the best methods for emission tests. We have general sampling methods which can be refined for specific cases, both in terms of sampling and of analysis.

Process Engineering

Our tests are regarded primarily as useful for environmental control purposes. An integral part of the standard method is measurement of gas flow in a process, and this can be used not only to establish mass emissions but also in comparison with process design criteria. The data obtained can therefore be part of process tuning for maximum efficiency.

Air Resource Management

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Where we are and how to contact us

Premises

34 Lincoln Road, Henderson

Air Resource Management Ltd

P.O. Box 21-639 Henderson

Phone 836-0489

Fax 838-8523

Please note our new fax number in your records and if necessary reprogramme your fax machine.

Contacts

Manager Richard Hoyle

025 977-852

ah 836-0492

rhoyle@clear.net.nz

Andrew Parkin

025 766-520

aparkin@clear.net.nz

Peter Conway

Mark Crooks

Daniel Hovell

James Willoughby

025 873-486

Graham Environmental Consulting Ltd

P.O. Box 21-639 Henderson

Phone 836-6184

Fax 838-8523

Contact

Bruce Graham

025 391-564

bruce.graham@xtra.co.nz

Fresh Air is the Newsletter of Air Resource Management Ltd – Air Emission Testing Services

Reports

Resource Consents commonly include conditions requiring regular emission tests, and the reporting of these to the consent authority.

Some clients have chosen to have test results forwarded directly to the authorities with copies sent to the sites. This ensures that the consent conditions are met as the onus is on us to complete the testing in time.

Please discuss this option with us if you wish.

Source Testing and Compliance Monitoring Discussion Documents

The Ministry for the Environment has issued these documents with an invitation to comment on them. This we have done. A precis of the submission follows.

One of our obligations to our clients is to preserve the integrity of any monitoring exercise and to carry through the emission test results to a logical conclusion. One unsatisfactory, regrettably common, aspect of the exercise is the incorrect interpretation of an emission result. Another is the wide discrepancy in emission discharge limits put in Resource Consents around New Zealand. We have addressed this issue in our submission.

Summary of Submission

The documents are an excellent basis for guidance for practitioners. They do have a bias towards the authors' experience.

The balance between discharge monitoring and ambient air testing is one which can only be considered on a case-by-case basis. Air discharge modelling using source testing data is a common exercise which is completely dependent on the quality of the data, especially the meteorological data. The limitations of each model must be recognised.

In setting air discharge limits the common starting point is a concentration limit. Increasingly mass emission limits are also required. When both are included it is important to balance between the two.

Sampling methods have been developed by several different authorities. By agreement with

the NZ Standards Association the Australian standards AS 4323.1 and 4323.2 apply in NZ. These should be used.

The RMA provides for the exercise of the best practicable option. This is seldom used and councils require guidance on how to apply it.

We have made a number of criticisms under the heading "Air Discharge Limits and Specific Requirements":

1. Contaminants should be unambiguously specified e.g. 20 mg/m³ formaldehyde (NTP, dry). Total aldehydes is ambiguous.
2. The costs of monitoring can be considerable. The question must be asked whether some or all of the money spent on monitoring would not be better devoted to e.g. the fitting of air pollution control equipment.
3. The matter of test port location continues to cause problems. A bottom line for unacceptable location should be specified. E.g. two diameters from upstream flow disturbance.
4. Sensitivity requirements are best left to the testing personnel.
5. "Normal" operation (conditions under which tests should be taken) should be specified.
6. Our recommended method for particulate sampling is AS 4323.2 based on ASTM 3685-78 or USEPA method 17.
7. Continuous monitoring methods can be very expensive. A cost-benefit analysis should be undertaken before these are required.
8. The BCURA cyclone probe should not be used except on coal-fired boiler installations.
9. Dräger or Gastec indicator tubes should be used under certain conditions.

Quality Assurance:

There is no place in a document of this type for extensive discussions on quality assurance. There are organisations (e.g. TELARC) better equipped to assure clients and councils of the quality of any monitoring undertaken.

Thanks to all our clients for your support during 1997. The office will be closed from 18 December to 5 January. For emergency tests during that period please try our cellphones. A Happy Christmas from ARM