

# INDUSTRY SUPPORT FOR MINING ENVIRONMENTAL PROFESSIONALS

News, Technical, Safety, Training and Innovation Information  
"Helping mining environmental professionals maintain  
best practice in a changing technical and regulatory environment"

[www.alsglobal.com](http://www.alsglobal.com)

EDITION 1 - JANUARY 2013



## SAFETY NEWS - MANUAL HANDLING

ALS recognises the risks of strain/sprain and slip/trip related safety incidents in the field. We took a lead position on manual handling many years ago, initially banning >40L, then  $\geq 36L$  and then the purchase of 32L eskies. In 2011 ALS moved to 20L eskies as the new standard halving of the weight of many eskies (and resultant injury risk) versus the mid 2000's.

If heavy eskies are a risk for you, we can often help. Current water sample requirements are often half what they used to be which can mean five large eskies for your monitoring project can often be replaced by five much smaller ones - helping make your team safer.



## QUARTERLY FEATURE - SAMPLING INNOVATION & BEST PRACTICE

Common organics testing in water can now be performed in a safer, more efficient and environmental-friendly way, thanks to an award-winning innovation in the laboratory.



Pollutants including TPH, TRH, PAH etc. now require significantly less sample as a result of ALS method development. The new methods also decrease waste and greenhouse emissions and improve manual handling considerations. Other major volume reduction projects benefit mining include:

- moving to 60ml bottles for metals, ferrous iron,
- hexavalent chromium and cyanide
- Changing to 250 and 500ml 'natural' bottles

Collectively these changes have cut the weight of samples collected, handled and freighted by clients by ~280,000kgs across Australia in 2012.

(cont' over leaf for more details)



## TRAINING / INDUSTRY NEWS

Industry Training is designed to support professionals and build knowledge. Further sessions are planned in 2013.

### Key Topics Include

- Getting the most from your Laboratory
- Sample Preservation, Chilling & Holding Times - Tips & Traps
- Field Techniques to Maximize Quality
- Laboratory Quality Control & Quality Assurance
- Understanding Guideline requirements & Interpreting Analytical reports



### Training Schedule for 2013

- Brisbane: March 2013 (date to be advised subject to interest)
- Perth : April 2013 (date TBA)
- Sydney: April 2013 (date TBA)
- Newcastle: May 2013 (date TBA)

## TECHNICAL SUPPORT FEATURE

### Cyanide determination: field techniques and considerations to maximise data quality

Cyanide determination in waters is a complex analysis subject to many chemical interferences, some of which can be common in your dams, process water or ground water. These include Sulphide, Thiocyanate, Nitrate/Nitrite and Oxidising agents. Sulphide - the most common is addressed through field preparation with one bottle to remove Sulfide interference and a second (industry standard NaOH - caustic preserved) bottle to stabilise the resulting water sample for analysis (Enviromail 62).

Other interferences that can cause false negatives or positives are explained in Enviromail 61. If your Cyanide results don't make sense or your 'cyanide kill' system shows higher than expected results your water matrix may be the culprit.

[Enviromail 61 - Cyanide Improving Data Quality](#)  
[Enviromail 62 - Cyanide - Field techniques](#)

For technical support, training etc. please [Contact us](#)





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## QUARTERLY FEATURE ARTICLE (CONTINUED)

This resulted in ALS being awarded the CARE Award recognising technology and innovation in the area of contamination assessment and remediation of the environment. The award is only offered every two years. Quoting CRC CARE Managing Director, Professor Ravi Naidu "This is an exceptional piece of technology that is going to make the task of contaminant identification and cleanup a whole lot easier. We felt it was a fitting winner of the inaugural CARE Award Sept 2011."

The idea of reducing volumes came from observing field and laboratory receipt staff moving large eskies (manual handling) and also listening to sampler feedback on the difficulty of obtaining samples from low recharge wells. Testing for TPH previously required 1.0 litre vs. the new 0.1 litre. Lower volumes has also improved sample quality (reduced sediment loads) giving fewer low level false positive results.

Over the last six years, ALS has progressively refined the use of technology and its methodology, to accommodate lower sample volumes without compromising quality and detection levels. With a lower volume, the total amount of solvent has been cut by up to 90% with glassware usage and waste and freight reduced by 70%.

This most significantly benefits efficiency of ground water sampling with low recharge wells and can reduce sampling costs. Manual handling benefits are wider spread especially where access to sites is poor and previously hefty loads of samples and bulky containers and bottles impacted sampling teams.



[Link](#) to CRC CARE website

## ALS AUSTRALIAN ENVIRONMENTAL LOCATIONS SUPPORTING MINING

Adelaide  
Bendigo  
Brisbane  
Darwin  
Gladstone  
Mackay  
Melbourne  
Mudgee  
Newcastle  
Perth  
Rockhampton  
Roma  
Sydney  
Townsville  
Wollongong

[For site addresses and contact details, click here](#)

## TECHNICAL ENVIROMAIL LINKS

- [Enviromail 07 - Acid Rock Drainage](#)
- [Enviromail 20 - Arsenic and Selenium Speciation in water](#)
- [Enviromail 25 - Webtrieve data access](#)
- [Enviromail 33 - Column Leaching ABCCs](#)
- [Enviromail 35 - Bioavailable Metals in sediment](#)
- [Enviromail 39 - Radionuclides in Water soil and sediment](#)
- [Enviromail 45 - Efficiency Improvements in water sampling](#)
- [Enviromail 46 - Extended Ferrous Iron Holding Times in water](#)
- [Enviromail 51 - TRH and BTEXN to meet the draft NEPM](#)
- [Enviromail 61 - Cyanide Data Quality](#)
- [Enviromail 62 - Cyanide - Field techniques](#)
- [Lab News - Sample Freight and Logistics](#)

## GUIDELINE/REGULATION LINKS

- [ANZECC Guidelines \(document 4a: an introduction\)](#)
- [Volume 1 - The Guidelines \(chapters 1-7\)](#)
- [Volume 2 - Aquatic ecosystems \(chapter 8\)](#)
- [Volume 3 - Primary Industries \(chapter 9\)](#)
- [Mining Environmental Guidelines WA - 2006](#)
- [QLD Department of Environment Guidelines](#)
- [NSW Environmental Management of Exploration, mining...](#)
- [Lab News - DERM Water Conditions for Coal Mines](#)

## ALS LINKS

- [COC](#)
- [Sample Container Request Form](#)
- [Pocket guide](#)
- [Holding Times for water](#)
- [MSDS Links \(go to Australia, then expand on MSDS\)](#)

