



## The International Network for Acid Prevention

*An organization of international mining companies dedicated to a reduction in the liability associated with sulphide mine materials*

March 2006

**NEWSLETTER**

[www.inap.com.au](http://www.inap.com.au)

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### INAP Members



[Russell Dix](#) (Elko)



[Linda Broughton](#) (Santiago)



[Les Hulett](#) (Toronto)



[Denis Kemp](#) (Toronto)



[Dan Ramey](#) (Phoenix)

[Larry Todd](#) (Phoenix)



[Mike Aziz](#) (British Columbia)

[Walter Benko](#) (Brisbane)

[Ross Gallinger](#) (Toronto)



[Bruce Kelley](#) (Melbourne)

[Rich Borden](#) (Melbourne)

[Steve Slater](#) (Melbourne)



[John Mudge](#) (Reno)

[Ken Ramsey](#) (Denver)

**CONTACT INAP at:**

Administrator- Amber Turner [Amber.Turner@riotinto.com](mailto:Amber.Turner@riotinto.com) +1 661 822 1473, California, USA

## 1. INAP 2006 Work Plan

In 2005, INAP focussed principally on outreach activities as well as a small number of important long-term research projects. The 2006 agenda aims to continue the same level of support to ARD events, particularly to this year's ICARD. INAP will also be supporting other events in Australia and Canada as well as exploring possibilities for events in Europe and South Africa.

Long term projects, such as the scale-up study at Diavik and the scoping for an acid drainage guide, will continue to be developed. In addition, the INAP Operating Committee (OpCom) aims to consider and identify current gaps in ARD in order to help determine future research directions for the network.

This year has also seen a number of changes for the INAP OpCom. The chair of the OpCom, Ross Gallinger from Placer Dome, stepped down to be replaced by a rotating chair with 1-2 year tenure. Ross' contribution to INAP as chair for 4 years was highly applauded and raised the profile of INAP from a little know organisation to one now widely recognised within the mining industry. Steve Slater from Rio Tinto acted as care taker in the role as OpCom chair until a new chair was appointed. Denis Kemp from Falconbridge is now chair of the INAP OpCom.

In addition, INAP is currently recruiting a new Technical Manager. Anne-Marie Fleury, the current Technical Manager, will be leaving INAP for a position with the International Council on Mining and Metals (ICMM). Her work alongside Ross was instrumental in raising the profile of INAP. We look forward to a continued association with Anne Marie through our links with ICMM and wish to recognise and thank her for her efforts over the last 4 years.

Finally, with the consolidation of several companies (Placer Dome and Barrick, Falconbridge and Inco), the INAP membership will be reviewed to address this and maintain the effectiveness of the network.

## 2. The Next ICARD (2009)

During the closing plenary session of the ICARD 7, to be held on the morning of Thursday 30 March, 2006, there will be the opportunity for discussion on the next ICARD to be held in 2009 (the 8th ICARD). This session will be chaired by Mr. Denis Kemp.

INAP will be inviting organizations to present bids for hosting the next ICARD conference. All participants at the session will have the opportunity through the chair, to pose questions of the presenters about their bid.

A number of criteria have been defined for selecting the next ICARD host. ICARDs should be hosted:

- By an organization with access to appropriate technical resources which enable the selection of high quality presentations for a

comprehensive overview of the latest ARD and metal mobilization information;

- With sufficient administrative support - INAP does not provide support for conferences;
- In a way which maximizes participation of key stakeholders (mining industry representatives, consultants, researchers, non governmental organizations and regulators);
- With international outreach on a global basis;
- In a way which promotes and maintains the 'ICARD identity' particularly if hosted in conjunction with another conference or forum;
- At locations which are readily accessible from key international locations. In addition, every alternate ICARD should be held outside North America if possible;
- At locations where relevant field trips and site visits can be organized;
- To capitalize on other possible attractions (e.g. at a location with tourist attractions or in conjunction with other events with similar audiences)

A final decision on the host for that conference may not be made in St Louis, depending on the nature and timing of the bids received. In that event, INAP would continue to manage the process of selection through its Operating Committee in co-operation with the Global ARD Alliance of regional organizations.

### 3. Scoping for an Acid Drainage Guide

Throughout 2005, INAP has been leading an effort to scope a collaborative project with the Global Alliance to establish a global guide on acid drainage. The scoping exercise has made progress, with a number of partners engaged in the steering process (ACMER, ADTI, MEND, PADRE, the Water Research Council of South Africa, and CANMET). The group has come to the consensus that there is a need for such a guide and is progressing towards defining what it would look like. It is hoped that the development of the guide can be initiated in the next year.

### 4. INAP Projects

In 2005 INAP supported the completion of two projects: 'The Role of Vegetation in the Long-term Containment of Mine Wastes: A Discussion Paper', and ACMER project; and 'Biological Sulphate Reduction Research Undertaken in South Africa', a study completed by William Pulles to supplement the 2003 report by Lorax. All reports are available from the INAP website.

INAP is continuing to support the scale-up study at the Diavik mine, owned by Rio Tinto in northern Canada. The Diavik Test Pile Research aims to determine if the current cover design for the waste rock is appropriate for

preventing long term low quality drainage. The test piles, which include a range of cover configurations, will provide information on thermal, hydrological, geochemical, and oxygen transport properties of the waste rock systems, before the actual construction of the full scale facilities. The research team includes ANSTO, the University of Alberta, the University of British Columbia, and the University of Waterloo.

Test Pile research at the Diavik mine began in early 2004. To date, several of the test piles have been constructed (this can only be carried out in the short summer period). Progress is going according to plan, with further construction and testing to be carried out in 2006.

## 5. Global Alliance with Regional Organizations

Some news from our global acid drainage alliance partners is summarized below.

### ACMER NEWS

In 2005, ACMER reached a significant milestone, having conducted 108 courses/workshops over the past 10 years. During the year, a total of 12 short courses/workshops, addressing both environmental and social issues relevant to the minerals industry, were conducted. A highlight of the year was the Fifth Australian Workshop on Acid Drainage, held in Fremantle from 29-31 August 2005, with 101 attendees and sponsored by INAP. The edited Proceedings for this workshop are expected to be available in April 2006.

During 2006, ACMER plans to conduct five short courses and 11 workshops covering both environmental and social issues. Courses/workshops particularly relevant to the prevention and management of acid drainage include Practical Monitoring for Improved Environmental Management, Risk Assessment and Management for Sustainable Mine Closure, and Materials Characterisation for Effective Mine Planning (see [www.acmer.com.au](http://www.acmer.com.au)).

ACMER is involved in a national committee overseeing the revision of the Best Practice Environmental Management in Mining booklets produced by government and industry from 1995 to 2003. Under this new Leading Practice Sustainable Development Program, originating from the Australian Government Department of Industry, Tourism and Resources, it is planned to produce four new booklets by mid 2006, viz. Community Engagement and Development, Land Rehabilitation and Revegetation, Mine Closure, and Materials Stewardship. ACMER is also involved in an Abandoned Mines Working Group to investigate a national approach to the issue of abandoned mines. The Group will benefit from other national programs being conducted in INAP Global Alliance partners (e.g. the NOAMI program in Canada).

### MEND News

The 12<sup>th</sup> Annual BC MEND Metal Leaching/ Acid Rock Drainage Workshop was held November 30<sup>th</sup> and December 1<sup>st</sup>, 2005 in Vancouver. The focus of the

presentations was on the challenges faced in mine drainage prediction. This is a topic of significant interest, attracting over 170 delegates. CD-ROM of the Proceedings can be ordered at: [www.bitech.ca](http://www.bitech.ca) or [books@bitech.ca](mailto:books@bitech.ca)

For more MEND news, you can view the latest [MEND Monitor](#) newsletter at the Natural Resources Canada Website. You can also contact MEND by e-mail: [mend\\_nedem@nrcan.gc.ca](mailto:mend_nedem@nrcan.gc.ca).

#### [ADTI News](#)

ADTI continue to be active in organizing the 7<sup>th</sup> ICARD. For the latest ADTI news, please visit ADTI members at the event or visit their website [www.unr.edu/mines/adtj](http://www.unr.edu/mines/adtj) .

#### [PADRE News](#)

#### **Symposium: Treatment Technologies for Mining Impacted Water on June 22<sup>nd</sup> and 23<sup>rd</sup> 2006 in Freiberg/Germany**

Mining, though declining in many European countries, still contributes to the wealth of numerous economies world wide. Both working and abandoned mines need mine water treatment since requirements of a good ecological water status have to be met.

In most working mines, active treatment schemes might be the state of technology, although some of them use passive mine water treatment. Active treatment systems have undergone a steady improvement for decades. Still, many plants are working with LDS-systems, but an increasing number of systems, Germany included, are now working with one of the innovative HDS system.

Passive systems are still not commonly accepted in all European countries. But constructed wetlands, RAP Systems (“Reducing and Alkalinity Producing Systems”) in lake techniques, or sulphur reducing reactors are becoming more and more used at closed and abandoned mine sites.

The two day symposium will therefore focus on the following mining topics:

- innovative active treatment systems
- passive water treatment
- passive prevention of water pollution
- mining and the European Water Framework Directive

Practitioners, scientists, and technicians are welcome to contribute to this discussion of ongoing surface and groundwater protection in mined areas. The language of the symposium will primarily be German (English according to your preferences).

The Symposium is organised by the Institute of Geology, Technische Universität Bergakademie Freiberg by Prof. Dr. B. Merkel, Dr. Ch. Wolkersdorfer, Dipl.-Geol. A. Berger, and in cooperation with Partnership

for Acid Drainage Remediation in Europe (PADRE), International Mine Water Association (IMWA), Deutsche Gesellschaft für Geowissenschaften (DGG), and Fachsektion Hydrogeologie in der Deutschen Gesellschaft für Geowissenschaften (FH-DGG)

Further information can be found on the website <http://www.geo.tu-freiberg.de/bht>

## 6. Forthcoming Events

Don't miss the following meetings and events related to acid drainage.

\* Potential INAP and Regional Organization meetings are indicated with an asterisk.

- \* [2006 SME Annual Meeting and Exhibit & 7th ICARD](#)  
March 26-29 2006, in St. Louis, Missouri, USA
- [Ore Dressing and Environmental Problems of Mining Activity](#)  
(Short Course) April 10-12 2006, in Geneva, Switzerland
- [ACMER Risk Assessment and Management for Sustainable Mine Closure](#)  
(Workshop) May 25-26 2006, in Newcastle, Australia
- [11<sup>th</sup> Annual Contaminated and Hazardous Waste Site Management](#)  
June 12-16 2006, Toronto, Ontario, Canada
- [ACMER Tools for Improved Mine Site Water Management](#) (Short Course)  
June 15-16 2006, Rockhampton, Australia
- [30<sup>th</sup> Annual BC Mine Reclamation Symposium](#) - Case Studies of Mine Reclamation and Environmental Protection  
June 19-22 2006, Smithers, British Columbia, Canada
- [Treatment Technologies for Mining Impacted Water](#) (Symposium)  
June 22-23 2006, Freiberg, Germany
- [5<sup>th</sup> International Congress on Environmental Geotechnics](#)  
June 26-30 2006, Cardiff, Wales, UK
- [ACMER Groundwater Dependent Ecosystems and Mining](#)  
June 28-29 2006, Adelaide, South Australia
- [4<sup>th</sup> M-WINE Workshop on Hardpan Formation and Waste Rock Geochemistry and Hydrology](#)  
July 1-8 2006, Kjeøy, Norway
- WISA Mine Water Technical Division (MWTD) Conference  
Event still in planning stages for the second half of 2006

- [31<sup>st</sup> Canadian Land Reclamation Association - Reclamation and Remediation Conference](#)  
Aug 20-23 2006, Ottawa, Ontario, Canada
- [ACG - Preparing and Implementing a Tailings Storage Facility and Operations Manual and First International Seminar on Mine Closure](#)  
Sept 11-15 2006, Perth, Western Australia
- [AusIMM - International Mine Management 2006](#)  
Oct 16-18 2006, Melbourne, Australia
- [MCA - Sustainable Development Conference](#)  
Oct 23-27 2006, Perth, Western Australia
- [\\* 13<sup>th</sup> Annual BC/MEND Workshop](#)  
December 2006, Vancouver, Canada  
Contact Mr. [Gilles Tremblay](#) (+1 613 992 0968) or Dr. [Bill Price](#) (+1 250 847 9335) for more information.
- [SWEMP 2007 - 9<sup>th</sup> International Symposium on Environmental Issues and Waste Management in Energy and Mineral Production](#)  
Dec 2007, Bangkok, Thailand