MINE WATER NOTES

A Word from the Secretary General

Dear Colleagues and Friends,

In August, I was informed that our past EC member, Arthur Louis McEwan, passed away at the beginning of 2007. I got to know Louis at the IMWA Symposium in Sevilla and I was happy to see him again during our South African meetings. Louis was one of the first who supported the idea of having this journal printed by Springer, and as long as he could, he promoted IMWA to his South African colleagues and beyond. I am sure that he would have been happy had he known that IMWA will be back in South Africa in 2009. I will always remember him as a good colleague and friend.

This is the second time since this journal has been published that a single issue has been dedicated to an IMWA symposium. The first time was when selected papers on acid mine drainage were reprinted from the Proceedings of the 1990 IMWA Symposium in Portugal. This journal was then known as the "International Journal of Mine Water" and volume 9 contained 18 papers, which you can download from our web page (http://www.IMWA.info/journal). The issue in your hands contains expanded versions of selected papers that were presented at the Sardinia Symposium this past May, which was organized by our member Rosa Cidu (Fig. 1). Since many of the papers submitted for publication in this journal tend to be hydrochemical in nature, our aim was to present some other mine water related topics and some case studies with less of a chemical focus. We hope you like this approach.



Fig. 1 Rosa Cidu, the organizer of the IMWA symposium 2007, explaining mine water discharges at the western Sardinian coast

Since Christmas and New Year is approaching soon—at least for most of you—I wish you all the best and I am looking forward to seeing you soon in the Czech Republic at out 10th IMWA Congress.

Glückauf Chris Wolkersdorfer

Paul Younger: Fellow of the Royal Academy of Engineering

Mine water scientists and engineers joined our IMWA member Professor Paul Younger and the HERO group at Newcastle University on October 31st to celebrate Paul's election as a Fellow of the Royal Academy of Engineering. (Fig. 2)

Professor Younger is an environmental engineer who directs the highly successful research group "HERO" (Hydrogeochemical Engineering Research & Outreach), the activities of which won Newcastle University the Queen's Anniversary Prize for Higher Education last year (see Mine Water Notes, January, 2006). In the summer of 2006, he was appointed "Energy and Environment" Science Theme Leader within the major Newcastle Science City initiative, and he is currently leading a North East consortium bid to host the UK's new Energy Technologies Institute, an initiative with a potential budget of a billion pounds. His personal research is also at the forefront of clean energy technologies. From 2004 to 2006, he directed the highly successful drilling and testing of the first deep (1,000 m) geothermal exploration borehole to be constructed in the UK in 20 years. Professor Younger is currently leading a major EU-funded technology transfer project on management of conflicted natural resources in Latin America, and is now launching an EPSRC-funded programme of collaborative professional development of young environmental engineers in the UK and India, which has a focus on improving the environmental performance of coal extraction and use in the sub-continent.

On hearing the news of his election as a Fellow of the Royal Academy of Engineering Professor Younger said: "This is an honour I never imagined I would ever receive, so I'm absolutely ecstatic! If I'm honest, its a bit scary to be elected to such an august circle of experts. Having said that, I'm really excited at the





Fig. 2 Celebrating Paul Younger as a Fellow of the Royal Academy of Engineering. From *left* to *right* Andrew Young (SAgE faculty administrator), Prof. Chris Edwards (former vice chancellor Newcastle University), John Hogan (registrar Newcastle University), Tricia

Younger (Pauls Younger's sister), Louise Younger (Paul Younger's wife), Paul Younger, and Dr Adam Jarvis (deputy head of HERO group)

opportunity that Fellowship of the Academy gives me to get involved in devising engineering solutions to some of the greatest challenges we face as a society".

"Our new Fellows demonstrate the importance of engineering in the modern world," said Academy President Lord Browne of Madingley. "They are the cream of the UK's engineering talent and many of them are actively involved in meeting some of the world's greatest challenges: energy provision, climate change, and sustainable use of materials. We salute their achievements".

Aiden Doyle, Newcastle University, Newcastle upon Tyne, UK.

CoSTaR: Apply now for EU-funded Research Opportunities on Mine Water Remediation

The CoSTaR project—Coal Mine Sites for Targeted Remediation Research—offers opportunities to scientists from all over Europe to study full-scale mine water treatment systems. CoSTaR is run by the HERO group of Newcastle University, UK, and is part of the European Commission's 6th Framework "Access to Research Infrastructure" funding programme. CoSTaR comprises six full-scale bioreactors, including a permeable reactive barrier, a compost wetland, a reducing and alkalinity producing system (RAPS), and four varieties of aerobic wetlands (receiving a range of acidic and alkaline mine waters, in one case with peroxide pre-dosing). Visiting researchers from across Europe come to Newcastle for periods of time ranging from a few weeks to up to 3 months in order to carry out project work on processes of pollutant and remediation and allied fundamental

biogeochemical processes, using the dedicated sites and working alongside existing HERO group researchers.

Funding for visitors to CoSTaR has been extended until the end of October 2008, covering all the costs of travel, accommodation, and consumables for experiments etc. Interested researchers from EU Member States can apply now to take part in the programme. For more information, e-mail: costar@ncl.ac.uk or visit their web site: http://www.ncl.ac.uk/environment/research/HEROCOSTAR.htm.

Global Acid Rock Drainage (GARD) Guide Update

INAP (International Network for Acid Prevention) recently awarded a contract to develop the beta version of the GARD Guide to Golder Associates, Inc. Golder has assembled an international consortium of experts to compile this multi-chaptered document. The purpose of the Guide is to consolidate current best practice in the management of contaminants produced by sulphide mineral oxidation. A "Wiki" approach will be used to develop and present the Guide. The beta version of the Guide is expected to be completed in June, 2008. After extensive internal and external peer review, the final web version of the GARD Guide will be publicly accessible from the INAP web site in 2009. Secretariat services for the GARD Guide are provided by the MEND Office. Visit their websites for additional information on their activities: INAP (http://www.inap.com.au);

Golder (http://www.golder.com).

From MEND Monitor, October, 2007.



Tailings: From Concept to Closure: A training DVD for owners and operators of tailings storage facilities

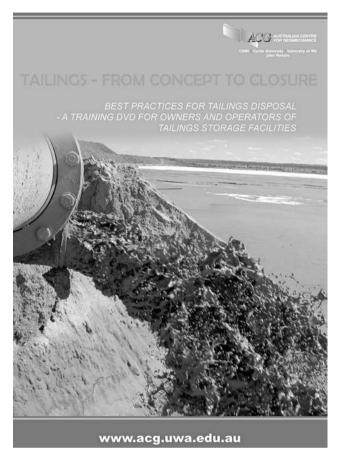


Fig. 3 Cover of the ACG training DVD "Tailings—From Concept to Closure"

The Australian Centre for Geomechanics seeks to build upon the skills and knowledge of mining operators and industry practitioners and assist them in improving mine safety and production performance. They have produced a training DVD that provides guidance to personnel involved in the management and operation of tailings storage facilities to facilitate the adoption of accepted best practices for the management of mine tailings (Fig. 3).

Topics Include

- Overview of types of tailings facilities and methods of construction used in various industries.
- Integrating operations into the tailings management life cycle.
- Risk management and geotechnical issues in tailings disposal.
- Potential modes of failure of tailings storage facilities, including examples from actual failures.

- Requirements of an operations manual and the implementation of an appropriate monitoring regime.
- Current best practice in the mining industry, including examples of emerging technologies.

Key Features

- High quality tailings storage facility images and stateof-the-art graphics.
- Reflects current Australian best practice.
- Applicable to most tailings storage facility operations.
- Duration: 58 min.

Costs

 A\$594—A\$700; to order a copy, send an e-mail to acginfo@acg.uwa.edu.au.

Sponsors

Barrick Gold of Australia Ltd; BHP Billiton Nickel West; Newmont Asia Pacific; Rio TintoWorlsey Alumina Pty Ltd.

From ACG Newsletter, August, 2007.

Notes on IMWA Members

Michael Riebensahm is the new head of Siemens Industrial Solutions in Santiago de Chile. He will be responsible for mine water management and treatment operations of Siemens S.A. Chile. His contact e-mail is michael.riebensahm @siemens.com.

At the beginning of this year, our former EC member Louis McEwan (south Africa) passed away. We will remember his affection for IMWA and the active role he played in discussions during our meetings.

Professor Paul Younger (Newcastle University, UK) was elected as a Fellow of the Royal Academy of Engineering this October.

ICARD 2009: SECURING THE FUTURE

It is a pleasure to announce the first call for abstracts for "SECURING THE FUTURE" and the 8th International Conference on Acid Rock Drainage (ICARD). These two international conferences will be fully integrated in a program during the week of 22–26 June 2009 in Skellefteå, Sweden. The week will start with short courses, continue with 3 days of presentations and discussions, and end with field excursions. The previous two "SECURING THE FUTURE" conferences in 2001 and 2005 received very positive



feedback from international participants. ICARD originates from an international seminar on acid rock drainage that was held in Röros, Norway, in 1988. Since then, ICARD has become well established as the number one international conference on ARD-related issues, with the location alternating between North America and Australia. In 2009, ICARD is returning to Scandinavia, and its scope will be expanded to include aspects of resource conservation as well as policy and regulatory issues related to mining and metal production.

We expect around 500 delegates to attend the event in Skellefteå in the best season of the year, with summer light throughout the night and typically sunny and warm weather. Please distribute this invitation within your networks to all that you think could be interested.

We look forward to receiving your abstract(s) and to seeing you in Skellefteå in 2009.

With the very best regards
Tomas From
Deputy Managing Director,
SveMin Chairman of the Organising Committee

those three issues and therefore decided to put together those country studies in one electronic article. You can download it from IMWA's home page or use the following Digital Object Identifier: http://dx.doi.org/10.1007/s10230-005-0081-3.

Members of IMWA can find a complete index (issues 1–25) of the International Mine Water Association's journal, *Mine Water and the Environment*, at our webpage: www.IMWA.info. Volumes 17(1), 18(1), 19(2), 20(1), and 21(1) as well as Proceedings of the 7th and 8th IMWA Congresses are still available for \$15.00 (US) a copy. Some other back-issues are available on request; copies of single pages at \$0.60 (US) each. Please add \$5.00 (US) for shipping/handling. You can also access the journal on line at http://www.imwa.info/springer. Issues of the journal published before the year 2000 can be accessed with the private login and password that you received with your last membership status notice or by e-mail.

Chris Wolkersdorfer, Munich, Germany

New Members

We welcome the following new members:

Stanisław Chałupnik, Katowice, Poland David Ettner, Snaroya, Norway Daniel Gomes, Sacramento, USA Josef Halir, Most, Czech Republic Luigi Marini, Genova, Italy Andrew Pearson, Solihull, UK Andrea Slesarova, Kosice, Slovakia Abhay Soni, Nagpur, India Danie Vermeulen, Bloemfontein, South Africa

We hope that our new colleagues will benefit from and contribute to the extensive mine water knowledge and expertise gathered within our group of inter—national experts. Please use your membership number in any correspondence, especially money transfers with IMWA. You can find it easily on your journal's address label, in front of the word "GES".

Adrian Brown, Treasurer, Denver, Colorado, USA; Chris Wolkersdorfer, Secretary General, Munich, Germany

Back Issues

An overview of European mine water was provided over three issues in 2005. We received many requests for

Forthcoming Events

March 5th-7th 2008, *Perth*, *Australia*First International Seminar on the Management of Rock Dumps, Stockpiles and Heap Leach Pads http://www.rockdumps08.com.

March 12th-15th 2008, Munich, Germany

Mine Water Short Course: From Ground Water to Mine WaterThis 4 day short course at Ludwig-Maximilian-University Munich covers hydrological, hydrogeochemical and hydrodynamic aspects in respect to the management of mine water. Included is an introduction in hydrogeochemical modelling with PHREEQC and a 1 day field trip to an abandoned Bavarian coal mine. The total costs are 250 € (reductions to IMWA members, students, and government offices apply).

ShortCourse@IMWA.info

May 6th-8th 2008, Nancy, France **Post Mining 2008** PostMining 2008@IMWA.info

June 1st–5th 2008, Carlsbad, Czech Republic **10th IMWA Congress** http://www.IMWA.info; imwa2008@IMWA.info



June 14-19, 2008, Richmond, Virginia, USA

25th Annual Meeting of the American Society of Mining and Reclamation

http://www.cses.vt.edu/revegetation/ASMR_2008.html

September 14th–18th 2008, Freiberg/Saxony, Germany 5th International Conference on "Uranium Mining and Hydrogeology"

http://www.geo.tu-freiberg.de/umh/

June 22nd-26th 2009, Sweden

ICARD 2009: "Securing The Future"

http://www.securing.skelleftea.se

September 2011, Aachen, Germany

11th IMWA Congress

http://www.IMWA.info; imwa2011@IMWA.info

