A Word from the Mine Water Notes Editor

Dear colleagues and friends,

Sad news – again – from China: while I was sitting here writing these Mine Water Notes, 22 miners were killed in a coal mine accident and more than 70 are still missing. Of course, the Chinese market is growing and where else should they purchase their coal if not their own country? But about 6000 Chinese coal miners were killed last year in various mine accidents, which means that approximately 1500 miners have died since this column was prepared three months ago. I know of no immediate measure to stop those casualties, but we should be aware that behind everything we buy from China, there might be several casualties from mine accidents.

By the time you read these Mine Water Notes, our 10th IMWA Congress in Oviedo/Spain will have just finished. We are scheduled to elect a new Executive Council and if you would like to know who has been elected, please visit our web site at: www.IMWA.info.

Chris Wolkersdorfer, Freiberg/Saxony

Back Issues

In our last three issues you could read about European mine water issues. We got many requests for those three issues and the articles were downloaded rather often from our web site. Therefore we decided to put together those country studies in one electronic article which you can either download from IMWA's home page or by using the following Digital Object Identifier: http://dx.doi.org/10.1007/s10230-005-0081-3

Members who recently joined IMWA can find a complete index (issues 1–23) of the *International Mine Water Association Journal* and *Mine Water and the Environment* at our web-page 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 (U.S.) a copy. Some other back-issues are available on request – copies of single pages at $ 0.60 (U.S.) each. Please add $ 5.00 (U.S.) for shipping/handling. You can also access the journal on line, using http://springerlink.com

Chris Wolkersdorfer, Freiberg/Saxony

New Members

IMWA welcomes the following new members:

William J Andrews, Oklahoma City, USA
Friedrich-Carl Benthaus, Brieske, Germany
John Bradley, Milton BC, Australia
Pat Corser, Steamboat Springs, USA
Ted Eary, Fort Collins, USA
Cary Foulk, Steamboat Springs, USA
Almuth Götz, Espenhain, Germany
Alexis Gutierrez, Maracailo, Venezuela
Brady Gutta, Morgantown, USA
Toby Leeson, Steamboat Springs, USA
Richard A Mann, Knoxville, USA
Liam Morrison, Galway, Ireland
Ryneth Nengovhela, Pretoria, South Africa
John Redmond, Steamboat Springs, USA
Gerd Richter, Brieske, Germany
Jörg Schlenstedt, Brieske, Germany
Jeff Skousen, Morgantown, USA
Tim K Slone, Caryville, USA
Christiane Uhlig, Bitterfeld, Germany
Leah Wolf-Martin, Steamboat Springs, USA

We hope that our new colleagues will benefit from and contribute to the extensive mine water knowledge and expertise gathered within our group of international 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". European Union members please ask for our German account details, convert US dollars to EURO and use our IBAN and BIC numbers, as they make money transfers within the European Union as cheap as it would be in your home country!

Adrian Brown, Treasurer, Denver, Colorado, USA

2006 Seminar: Global mine closure strategies – what constitutes success?

The widespread challenges of closing mines in an environmentally and socially acceptable way will be addressed by the international mining community at the 1st International Seminar on Mine Closure planned for Perth, Western Australia in September 2006.

The issue of economic and socially acceptable closure of mine sites is one of the greatest challenges facing the global mining industry. The increasing attention being paid by the media to the legacy of abandoned mine sites has focussed public interest on mine closure issues. In response, legislators and regulators are implementing various financial instruments to provide surety that closure will be affordable. These are often underpinned by various rehabilitation criteria that must

be met to avoid financial penalties. It is also important to have clearly defined, unambiguous and appropriate criteria for what constitutes acceptable closure. Approval for future mining projects will more likely be obtained if the industry demonstrates it is able to close existing sites in a responsible and environmentally and socially acceptable manner.

The organisers of this seminar hope that the event will become an annual vehicle for legislators, mine owners and operators, consultants, service providers and researchers from throughout the world to exchange views on how best to ensure that future closure of mine sites is achieved at minimum cost, whilst ensuring that future environmental and social impacts are minimised. By using opportunities such as this for setting the agenda for future research and operational directions, the viability of mining operations can be ensured.

The technical program will include comprehensive and highly relevant technical papers emphasising innovations and application of state-of-the-art technologies and closure strategies from around the world. Seminar themes include: regulatory expectations and legal requirements, financing closure, case studies on mines that have already been relinquished, rehabilitation and success criteria, planning for closure, managing acid drainage, addressing community concerns and social impacts, landform evolution, primary successions and ecosystem developments, and pedogenesis on covers and wastes.

For more information, please contact Josephine Ruddle at the ACG via acg@acg.uwa.edu.au

Interested in Groundwater & International Law?

Burchi, S. & Mechlem, K. (2005): Groundwater in international law – Compilation of treaties and other legal instuments [sic!]: FAO Legislative Studies 86. – 584 p., 3 tab.; Rome, ISBN 92-5-105231-X.

Groundwater represents about 97% of the fresh water resources available on earth, excluding the water locked in the polar ice. Aquifers, among them numerous trans-boundary ones, are coming under growing pressure from over-extraction and pollution, which seriously threaten their sustainability. Until now international law has paid much less attention to groundthan to surface water. Slowly, however, a body of rules dealing with this vital resource is emerging that indicates a trend towards more comprehensive international regulation. This publication brings together binding and non-binding international law instruments that, in varying degrees and from different angles, deal with groundwater. Its aim is to report developments in international law and to contribute to detecting law in-the-making in this important field.

Though mine water is not of special concern in this publication, it is covered in several aspects therein. To order, visit http://www.fao.org

Adapted from: FAO; European Water Management News

Book Reviews

Hölting, B. & Coldewey, W. G. (2005): Hydrogeologie – Einführung in die Allgemeine und Angewandte Hydrogeologie. – 6th edition, 326 p., 118 fig., 69 tab.; München (Elsevier), ISBN 3-8274-1526-8.

This is a new edition of one of the leading German introductory books about hydrogeology, which nearly every German speaking hydrogeologist has in his book shelter. Nine years have passed since the last edition and there are three obvious changes between the 5th and the 6th edition: a change in the book's shape, a new printing house (Elsevier instead of Enke), and – for the first time – a co-author.

Inside the book many figures have been redrawn, the equations have been newly – and consistently – typeset, and the tables are clearer than before. Although the authors are using the new German spelling in the text, some of the figures still use the old German spelling – even in the new figures.

Hölting and Coldewey subdivide their book into eight chapters: Introduction, Historical Overview, Definition of Groundwater, General Hydrogeology, Applied Hydrogeology, Remarks, References, and Index. As in the previous editions, the general aspects of hydrogeology constitute the largest part in the book: 198 out of 326 pages – which is the reason for this book being one of the basic hydrogeology books in the German-speaking world. Yet, applied aspects of hydrogeology are still well covered with 66 pages, which are enough for an introduction, though not enough for those who want more details (well, the book is only meant to be an introduction).

A large part of the book is dedicated to water chemistry and plausibility checks as well as the evaluation and the presentation of hydrogeological results. Tracer tests are also covered, but those three pages need a thorough rewriting, as new methodologies are not mentioned, though an excellent book about tracer techniques has recently been published by Käß (see review below).

There are several minor mistakes, which are mainly misspellings or printer's errors. For example, at page 178, instead of $CaSO_4$ they write CaSO4. At page 185,

there is a single word in the middle of a sentence. An ugly mistake is the definition of the pH-value: they define it as the negative common logarithm of the proton concentration instead of the proton activity. For most situations, the concentration equals the activity, but in acid mine waters, that definition of the pH gives wrong results.

In conclusion, this book can recommended to everybody working in hydrogeology: the student as well as the experienced hydrogeologist who wants to look up an equation or definition for a certain water parameter, as it imparts all the necessary basics for hydrogeology. It is also a good choice for non-hydrologists, such as engineers or biologists, as the language is not too complicated and even beginners in German will profit from "Hydrogeologie".

 Käß, W. (2004): Geohydrologische Markierungstechnik. – In: Matthess, G.: Lehrbuch der Hydrogeologie 9. – 2nd edition, 557 p., 239 fig., 43 tab., 8 plat.; Berlin (Borntraeger), ISBN 3-443-01050-4.

Werner Käß is a leading tracer hydrogeologist in Germany and the first English edition of this book was published seven years ago (Käß, W. [1998]: Tracing Technique in Geohydrology. – 581 p., 270 fig., 40 tab., 8 plat.; Rotterdam [Balkema].) He recently published his 2nd edition of the German version. His tracer books are still the only comprehensive books on tracer techniques, and none of the many guidelines published in several countries reach Käss' completeness – with the exception of mine water tracer tests.

"Geohydrologische Markierungstechnik" [Geohydraulic Tracer Techniques] is divided into 5 chapters and has an excellent reference section covering 46 pages of English, German, and French literature. Besides that, there is a register with a location index, a subject index and a German–English glossary, the latter being very helpful when reading English publications about tracer techniques.

As in the earlier English and German editions, Käss made use of 13 experts, who wrote special chapters, adding substantial expert knowledge to the book. First, all known tracer types are described in detail on 255 pages and even exotic tracers, such as eels or tennis balls are mentioned. Then, the preparation and execution of a tracer test is explained and a thorough description of their evaluation is given. Of great value is Käss' last chapter, which gives examples of nine different types of applications from surface water to ground water with more than 30 case studies. Compared to the last edition, this section has been substantially extended.

Everybody who is conducting tracer tests or who has to interpret them should buy this book. It is written for hydrogeologists and hydrologists as well as for engineers and it covers a great deal more material than the first edition or the English translation.

Chris Wolkersdorfer, Freiberg

Forthcoming Events

5th – 9th September 2005, Oviedo, Spain

10th IMWA Congress 2005;
http://www.IMWA.info; imwa2005@IMWA.info

11th – 16th September 2005, Freiberg/Saxony

Uranium Mining and Hydrogeology IV;
http://www.geo.tu-freiberg.de/umh;
umh@geo.tu-freiberg.de

15th – 16th September 2005, Nicosia, Cyprus

1st International Conference on Sustainable Urban Wastewater Treatment and Reuse, SUWTR 2005;
http://www.uest.gr/medaware.htm;
suwtr2005@ucy.ac.cy

16th – 18th November 2005, Nancy, France

Post-Mining Reclamation 2005;
http://www.mines.inpl-nancy.fr/gisos/

27th – 30th March 2006, St Louis, USA

IMWA/ICARD/SME/ASMR Symposium 2006;
http://www.smenet.org/meetings/AnnualMeeting2006/Author/icard.cfm;
asmr2@insightbb.com

20th – 23rd August, 2006, Ottawa, Canada

Annual Meeting Canadian Land Reclamation Association (CLRA)/Association canadienne de réhabilitation des sites dégradés (ACRSD);
http://www.clra.ca; btisch@nrcan.gc.ca

13th – 15th September, 2006, Perth, Australia

1st International Seminar on Mine Closure;
http://www.acg.uwa.edu.au; acg@acg.uwa.edu.au