

Use of Geochemical Data in Environmental Management of the Mine Site – a Workshop & ACG Management, Operation and Relinquishment of Tailings Storage Facilities Seminar

27-29 NOVEMBER 2018 | THE UNIVERSITY CLUB, THE UNIVERSITY OF WESTERN AUSTRALIA, PERTH

Photograph courtesy of Stantec

REGISTRATION BROCHURE

Use of Geochemical Data in Environmental Management of the Mine Site – a Workshop

27 November 2018

A one-day workshop on the application of geochemical data in the assessment of the mining environment specifically designed for mine personnel having no formal training in environmental geochemistry, and only rudimentary understanding of geochemistry and geochemical data.

Geochemical assessment of contamination arising from mining and the storage of waste rock and tailings are now integral and vital components of mine planning, management and closure. Whilst mines employ environmental officers and may have significant environmental departments, normally few personnel have formal training in environmental geochemistry. Such training is also far from universal amongst staff of consultancies advising the mining industry. This workshop provides a theoretical foundation to the environmental impacts of metals and other chemical contaminants encountered at the mine site, and practical advice on the acquisition, interpretation and reporting of environmental geochemical data. In addition to well-illustrated presentations on individual topics, it will encourage discussion of experiences and problems raised by those attending.



Presenter:

Adjunct Associate Professor Ron Watkins
The University of Western Australia
Managing Director
Environmental Geochemistry Services

SEE INSIDE FOR EVENT PROGRAMMES

Management, Operation and Relinquishment of Tailings Storage Facilities Seminar

28-29 November 2018

This two-day ACG seminar will address the issues facing site personnel involved in the day-to-day management of tailings storage facilities (TSF) and the obligation to comply with the relevant operating standards and closure requirements. The seminar will explore the conditions and challenges encountered in day-to-day mining, innovative solutions utilised in different mining operations and environments and will include case studies, specialist presentations and discussion sessions.

Seminar topics:

- A regulator's perspective of closure of tailings storage facilities
- The Mining Rehabilitation Fund
- Tailings management – avoiding potential liabilities
- Roles and responsibilities of the Engineer of Record
- Preparation of an effective OMS manual
- Stability considerations of soft cover tailings
- In-pit disposal
- Cost comparisons of tailings management options
- Interpretation of in situ testing in tailings
- Operational challenges in dry stack tailings storage
- Design for earthquakes - ANCOLD guidelines
- Dam break analysis
- Static liquefaction
- Management of the acid mine drainage threat
- Water management – Merriespruit case study
- Stakeholder engagement in Alcoa of Australia's long term residue planning
- Upstream raising tailings storage facilities
- Case study - ins and outs of HDPE lined TSFs



Facilitator:

Professor Andy Fourie
School of Civil, Environmental and Mining Engineering
The University of Western Australia

Use of Geochemical Data in Environmental Management of the Mine Site Workshop

27 NOVEMBER 2018 | THE UNIVERSITY CLUB, THE UNIVERSITY OF WESTERN AUSTRALIA

Who Should Attend

The workshop will be of interest to anyone associated with the mining industry who has had to address a chemical contamination problem, or has ever been in possession of the results of geochemical analysis requiring environmental interpretation and has thought, where do I begin? Those attending require no prior formal training in chemistry or environmental geochemistry, as concepts and information are presented in a way that is readily understood by anyone with a basic scientific or engineering background. The workshop will be of value to a wide variety of mining and consulting personnel who have need to report on geochemical aspects of the mine site, including mine managers, environmental officers, waste rock and tailings managers, consultants, geologists and engineers.



Presenter:

Adjunct Associate Professor Ron Watkins
The University of Western Australia
Managing Director
Environmental Geochemistry Services

Ron gained his PhD from the University of London studying the geological background and palaeo-environments of human evolution in the Rift Valley of northern Kenya. He subsequently obtained an MSc in Geochemistry at the University of Leeds. He has held lecturing and senior research posts at the University of London, University of St Andrews, University of Cape Town and Curtin University. He was co-founder of the Environmental Inorganic Geochemistry Group (EIGG) in 1998 and has been director from 2004. In 2015 he established Environmental Geochemistry Services (EIGG International Pty Ltd). He is currently Adjunct Associate Professor at The University of Western Australia.

PROGRAMME* 27 NOVEMBER 2018	
07:30	REGISTRATION
08:00	Welcome and introduction; expected outcomes
08:15	Section 1 – Mining contamination and the environment
09:00	Section 2 – Environmental geochemical data
10:00	Section 3 – The geochemical background
10:30	MORNING BREAK
11:00	Section 4 – Elements and substances of environmental significance
12:00	Section 5 – Minesite pollution sources and receptors
12:30	LUNCH
13:30	Section 6 – Interpreting water quality data
14:30	Section 7 – Waste rock and tailings characterisation
15:30	AFTERNOON BREAK
16:00	Section 8 – Reporting of geochemical information
16:30	Discussion; case studies
17:30	WORKSHOP CLOSE



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Papers from ACG International mining and geomechanical events are openly accessible at papers.acg.uwa.edu.au

EVENT VENUE

The event venue is The University Club, situated at The University of Western Australia, a 10 minute drive from Perth's CBD.

The University Club, The University of Western Australia
Entrance No. 1, Hackett Drive, Crawley, Perth
Ph: +61 8 6488 8770
Email: info@universityclub.uwa.edu.au

ACCOMMODATION

The following accommodation is close to UWA. For alternative accommodation visit acg.uwa.edu.au/about-events-and-courses.

Forrest Hall

1 Hackett Drive, Crawley | www.forrestresearch.org.au/forrest-hall/
(list the Australian Centre for Geomechanics as the department you are visiting, and UWA as the institution you were invited by)
Ph: +61 8 9488 0500 | Email: shortstay@uwa.edu.au

Medina Apartment Hotel

33 Mounts Bay Road, Perth | www.medina.com.au/medina-grand-perth/hotel
Ph: +61 8 9217 8000 | Email: mgpc@medina.com.au

Rendezvous Studio Hotel Perth Central

24 Mount Street, Perth | www.rendezvoushotels.com/perthcentral
Ph: +61 8 9481 0866 | Email: reservations.perth@rendezvoushotels.com

Sullivans Hotel Perth

166 Mounts Bay Road, Perth | www.sullivans.com.au
Ph: +61 8 9321 8022 | Email: perth@sullivans.com.au

* Programme may be subject to change. Please see www.acg.uwa.edu.au/events/ for updates.

ACG Management, Operation and Relinquishment of Tailings Storage Facilities Seminar

28–29 NOVEMBER 2018 | THE UNIVERSITY CLUB, THE UNIVERSITY OF WESTERN AUSTRALIA

DAY ONE PROGRAMME* 28 NOVEMBER 2018	
08:00	REGISTRATION
08:20	Welcome and introduction <i>Andy Fourie, The University of Western Australia</i>
08:30	Closure of tailings storage facilities from a regulator's perspective <i>Department of Mines, Industry Regulation and Safety</i>
09:15	The mining rehabilitation fund (MRF) – an update <i>Department of Mines, Industry Regulation and Safety</i>
10:00	MORNING BREAK
10:30	Tailings management – avoiding potential liabilities <i>Mark Etherington, Clayton Utz</i>
11:15	Roles and responsibilities of the Engineer of Record <i>Johan Boshoff, Golder Associates Pty Ltd</i>
12:00	How to prepare an effective OMS manual <i>David Brett, GHD Pty Ltd</i>
12:45	LUNCH
13:45	Placing a cover over soft tailings – stability considerations <i>Andy Fourie, The University of Western Australia</i>
14:30	In-pit disposal <i>Chris Lane, L&MG SPL</i>
15:15	AFTERNOON BREAK
15:30	An integrated approach to cost comparisons of different tailings management options <i>Aida Carneiro, The University of Western Australia</i>
16:15	Interpretation of in situ testing in tailings <i>David Reid, The University of Western Australia</i>
17:00	CLOSE DAY ONE

DAY TWO PROGRAMME* 29 NOVEMBER 2018	
08:00	Dry stack tailings storage facility – overcoming operational challenges <i>David Leaney, BIS Industries</i>
08:45	Developments in design for earthquakes – ANCOLD guideline and new earthquake guideline <i>David Brett, GHD Pty Ltd</i>
09:30	Dam break analysis <i>Behnam Pirouz, ATC Williams</i>
10:15	MORNING BREAK
10:30	Static liquefaction – an update <i>Andy Fourie, The University of Western Australia</i>
11:15	Planning for management of the acid mine drainage threat <i>Ron Watkins, Environmental Geochemistry Services</i>
12:00	Water management – Merriespruit case study <i>Gordon McPhail, Water, Waste and Land Australia</i>
12:45	LUNCH
13:45	Stakeholder engagement in Alcoa's long term residue management planning <i>Anika Wall, Alcoa of Australia</i>
14:15	Upstream raising TSFs: the good, the bad and the ugly <i>Pepe Moreno, SRK Consulting</i>
14:45	AFTERNOON BREAK
15:15	Case study – some ins and outs of HDPE lined tailings storage facilities <i>Gareth Swarbrick, Pells Sullivan Meynink</i>
16:00	Panel discussion <i>All presenters</i>
16:30	SEMINAR CLOSE - DRINKS AND SAVOURIES

Who Should Attend

The seminar is directed at personnel with responsibilities in mine planning and design and in developing feasibility studies for mine completion and decommissioning; indeed to all mine managers, superintendents and operators, as well as consultants involved in the management of tailings storage facilities. There will be ample opportunity for discussion and questions from the participants.

Take advantage of discounted registrations with earlybird rates before 21 September 2018!



Facilitator:

Professor Andy Fourie
School of Civil, Environmental and Mining Engineering
The University of Western Australia

Andy is a Professor in the School of Civil, Environmental and Mining Engineering at The University of Western Australia. He has Bachelors and Masters degrees from the University of the Witwatersrand in South Africa, and a PhD from Imperial College, University of London.

His research is in the field of mitigating the impact of mining and municipal solid waste disposal. Outcomes from his research have been incorporated in changes to environmental legislation in South Africa.

Professor Fourie contributed to a series of guidelines for managing mine tailings in Australia, as well as developing a document for the International Atomic Energy Association on barrier systems for retaining uranium mining waste.

* Programme may be subject to change. Please see www.acg.uwa.edu.au/events/ for updates.

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REGISTRATION FORM

CONTACT DETAILS

Please print. *denotes mandatory fields.

*Title (Mr, Mrs, Miss, Ms, Dr, Prof., other) _____

*Family Name _____

*First Name _____

Preferred Name _____

*Position _____

*Organisation _____

Mine/Dept _____

*Address _____

Phone _____

Mobile _____

*Email _____

*All confirmations/event updates will be sent via email.

Registrants contact details are intended to be published in the events authorised attendee list made available to event attendees, who may contact you, including electronically.

I give permission for my details to be included in the event attendee list.

I give permission for the ACG to send me ACG research, training and/or education information advice, including electronic communications.

I require an invitation letter for visa purposes (please forward a copy of your passport information page). For more information regarding Australian visas, please visit acg.uwa.edu.au/about-events-and-courses/

DELEGATE CANCELLATIONS

Up to 8 days before event commencement: an administration fee of AUD 150 will be charged. 7 or less days before: no refund. Non-attendance: no refund. Substitutions will be accepted at any time. The ACG reserves the right to cancel the short courses if insufficient registrations are received.

† Please visit www.acg.uwa.edu.au/corp_affiliates to view the list of ACG Corporate Affiliates.

^ Students are required to provide proof of full-time enrolment at time of registration.

Management, Operation and Relinquishment of Tailings Storage Facilities Seminar (1850) | 28-29 November 2018

	Earlybird Paid before 21 Sep 2018	Standard Paid after 21 Sep 2018
Standard	<input type="checkbox"/> 1,980	<input type="checkbox"/> 2,200
ACG Affiliate†	<input type="checkbox"/> 1,760	<input type="checkbox"/> 1,980
Student^	<input type="checkbox"/> 660	<input type="checkbox"/> 990

Use of Geochemical Data in Environmental Management of the Mine Site Workshop (1851) | 27 November 2018

	Earlybird Paid before 21 Sep 2018	Standard Paid after 21 Sep 2018
Standard	<input type="checkbox"/> 770	<input type="checkbox"/> 990
ACG Affiliate†	<input type="checkbox"/> 550	<input type="checkbox"/> 770
Student^	<input type="checkbox"/> 220	<input type="checkbox"/> 440



Tailings - From Concept to Closure Training DVD

This DVD and other tailings educational publications can be purchased at acg.uwa.edu.au/shop

Delegate Terms and Conditions are available at <http://acg.uwa.edu.au/wp-content/uploads/2018/05/ACG-Delegate-Terms-Conditions.pdf>

PAYMENT

Total payment AUD _____

Payment to be received by 23 November 2018. All bank fees are the responsibility of the registrant.

ABN 37 882 817 280

All prices include Australian GST

PAYMENT OPTIONS

Electronic Funds Transfer (EFT)

Please return this completed form to info-acg@uwa.edu.au and the ACG will send you an invoice with EFT details included.

PO# (if required) _____

Credit Card

Please return this completed form to info-acg@uwa.edu.au and the ACG will send you a credit card authorisation form. Alternatively, please phone us on +61 8 6488 3300 to make payment (Visa and Mastercard are the only cards we accept).

How to register:



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