MineClosure

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MINE CLOSURE 2024

26–28 NOVEMBER 2024 | THE WESTIN PERTH, PERTH WESTERN AUSTRALIA

EARLYBIRD REGISTRATION ENDS 17 OCTOBER 2024!

The series of International Conferences on Mine Closure is a fixture on the calendars of many mining professionals, providing topical and high quality papers and presentations on a range of topics of immediate interest and relevance. A key feature of the conference series is the diversity of disciplines and expertise that come together to focus on the pressing issues facing the mine closure community globally.

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THEMES

At Mine Closure 2024 we are taking a new approach to the conference themes. This year we are focusing the Mine Closure conference within the framework of the UN Sustainable Development Goals (SDGs).

According to the UN, 'The SDGs aim to transform our world. They are a call to action to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice, and prosperity.' These goals map closely to what good mine closure should aim for as an outcome and many of our themes in previous conferences map closely to these. To help us look beyond the mines we wish to close, we hope to encourage a broader appreciation of what our industry and conference can achieve on the global stage.

Stakeholders and communities

Closure objectives and criteria

Financing and cost estimation

Relinquishment and legacy management

Landform and engineering design

Surface water and erosion control

Ecosystem reconstruction

Statutory compliance

Contaminant remediation and impact management

Visit acgmineclosure.com/themes to learn more about the connection of mine closure themes to the UN Sustainable Development Goals.

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ACCEPTED ABSTRACTS*

Orphaned and abandoned mines in Manitoba: from identifying hazards to achieving closure *M Ahmeduzzaman, KGS Group, Canada*

The critical post-closure inspection, monitoring and maintenance for establishing cover systems *K Albano, Rio Tinto, Australia*

Climate-resilient tailings storage facility closure design: a multidisciplinary approach *K Albano, F Maluly-Kameid, A Magee, Rio Tinto, Australia*

Multi-hazard index for assessing the interaction between post-mining hazards *MM Al Heib, Ineris, France*

Nuclear power renaissance and the challenge of closing uranium mine and mill sites in the Western United States *C Ardito, INTERA, USA*

Aspects that may be considered in decharacterisation designs of mining geotechnical structures *F Azevedo, J Lima, Geoestável Consultoria e Projetos, Brazil*

Legacy mines in Greenland: drivers of environmental pollution and lessons learned *L Bach, Aarhus University, Denmark*

Enhancing geotechnical stability of Latrobe open pit mine slope through brown coal–clay soil mixtures *N Baghbani, T Baumgartl, Federation University, Australia*

Predictive modelling of Factor of Safety for Victoria open pit mine using numerical and artificial intelligence techniques *N Baghbani, T Baumgartl, Federation University, Australia*

Laisvall tailings storage facility Sjömagasinet post-closure status and upgrade of closure measures *J Banck, Tailings Consultants Scandinavia, Sweden; A Lindgren, M Jakobsson, Boliden, Sweden; A Bjelkevik, Tailings Consultants Scandinavia, Sweden*

An overview of vegetation rehabilitation methods at Oyu Tolgoi mine in Mongolia *D Batsuui, A Balt, B Altantuya, A Enkhtuya, M Lkhagvasuren, U Purevsuren, T Oyun-Erdene, Oyu Tolgoi, Mongolia*

Performance evaluation of waste rock dump closure cover systems in different climate zones of Turkey *B Baysal, K Yilmaz, Middle East Technical University, Turkey*

Leveraging probabilistic groundwater flow and transport modelling to improve environmental risk assessment in mine remediation and closure planning *L Beal, S Miller, K Markovich, INTERA, USA*

Social transitioning: going beyond the mine closure regulatory minimum *R Bloemhof, J Bothma, WSP, South Africa*

Legacy waste disposal and hazard reduction: lessons from the Gunnar Mine site remediation *C Boese, B Marcotte, SRK Consulting, Canada; V Zimmer, Saskatchewan Research Council, Canada*

Towards a sustainable legacy: integrating net zero targets into mine rehabilitation and closure planning *B Boshrouyeh, WSP, Australia; S Amari, Sustainable Minerals Institute, The University of Queensland, Australia; R Hattingh, WSP, Australia*

Harmonising engineering and landform design for sustainable mining: a case study *P-W Botha, G van Wyk, D Slabbert, E-TEK Consulting, South Africa*

What conversations should community stakeholders be involved in? *J Brereton, R Joiner, Mine Land Rehabilitation Authority, Australia*

The perfect storm: mine closure in the Latrobe Valley, Victoria *J Brereton, A Scrase, Mine Land Rehabilitation Authority, Australia*

A conceptual risk-management framework for post-closure settlement of fill *G Brink, E Heymann, Rio Tinto, Australia*

Risks and cost estimates: the disconnect *GM Byrne, Niboi Consulting, Australia*

Queensland's mining rehabilitation reforms five years on: a review of implementation risks and challenges from an industry perspective *K Carter, ATC Williams, Australia*

Design constraints on a closure design basis and cover options assessment for a gold mine tailings facility *A Cash, BGC Engineering, Canada*

How long is long-term? Carrying seismic risk through the post-operational period *P Chapman, WSP, Australia*

Former open pit mine to recreational lake *C Cheah, G Martins, HUESKER, Australia*

Integrated closure planning and closure criteria: the road to success…criteria *N Coetzer, J Erasmus, E-TEK Consulting, South Africa*

Timnath aggregate mine planning for closure: optimising post-closure land use through mine operations *JS Collyard, M Arigoni, SLR Consulting, USA*

Research-led adaptive management in rehabilitation *L Commander, C Blackburn, G Mullins, Alcoa, Australia*

Regional-scale post-mining land use transition: opportunities and challenges for industry and regulators *C Cooper, IEMA, Australia*

Use of closure provision to enable optimised closure outcomes: Escondida experience *C Correa, BHP, Chile*

Application of ecological resilience in mining rehabilitation practice and its regulation *E Cowan, R Standish, M Hughes, Murdoch University, Australia; B Miller, J Stevens, Kings Park Science, Australia*

Application of remote sensing data to measure erosion on rehabilitated landforms at the Abydos mine *H Crisp, Mine Earth, Australia; A Slabber, T Sprenkels, Atlas Iron, Australia; S Gregory, Mine Earth, Australia*

A framework for managing assumptions in mine closure cost estimates *R Crumpler, Rio Tinto, Australia*

Closure visioning: concepts and tools *G Davies, Eco Logical, Australia*

Water treatment development plan for Rio Tinto closure assets *S Daykin, Isle, Australia*

A novel approach for modelling water quality at mine closure *S Dayyani, WSP, Canada*

Ten years of cover performance data and capillary break investigation for leading-practice store-and-release cover trials at Century Mine *P Defferrard, Sibanye Stillwater Australia Operations, Australia; T Rohde, SGM Environmental, Australia*

Using black shale chemical indices of alteration and chemical weathering indices to assist acid mine drainage management in Pilbara iron ores *H Deng, Okane Consultants, Australia*

*Correct as at 14 April 2024. See acgmineclosure.com for updates.

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ACCEPTED ABSTRACTS*

The common shortcomings in mine closure cost estimates and tips for developing more accurate estimates *E Denholm, E Smedley, S Mackenzie, Mine Earth, Australia*

Decision-making in the closure of mining operations: prioritisation criteria in focus *IN Diniz, Vale, Brazil*

Provisioning for asset decommissioning: resource management, release criteria, and activity monitoring *IN Diniz, Vale, Brazil*

Climate change: geotechnical and hydrogeological considerations for slope and waste rock dump closure *PJH de Graaf, Giraffe Mining, Australia; J Dixon, Fortescue, Australia; G Beale, Piteau Associates, UK*

Geotechnical properties of well-compacted coal wash for use as backfill in mine rehabilitation projects: literature review and laboratory testing for assessment of settlement characteristics *S Du, S Ghimire, D Piccolo, PSM, Australia*

Unmanned aerial vehicle based monitoring of trial closure design batter of post-mining landforms in far north tropical Queensland: a comprehensive approach *O Dudley, Red Earth Engineering, Australia*

Envisioning the future: Does imagery help or hinder? *J D'Urso, CRC TiME, Australia; K Beckett, Pershke Consulting, Australia*

Aro fund request system *B Durta, AL Queiroz, Vale, Brazil; E Lopes, R Martins, MCA Auditoria e Gerenciamento, Brazil; IN Diniz, Vale, Brazil; JP Silva, MCA Auditoria e Gerenciamento, Brazil*

Comparing coal mine rehabilitation practices in Queensland, Australia with Wyoming in the USA *J Dunlop, JA Purtill, Queensland Mine Rehabilitation Commissioner, Australia; M Kuchanur, K Wendtland, Wyoming Department of Environmental Quality, USA*

Scaling native seed use for mine rehabilitation: a multi-disciplinary approach *T Erickson, M Masarei, A Guzzomi, The University of Western Australia, Australia; M Muñoz-Rojas, University of Seville, Spain; L Commander, Alcoa, Australia; E Stock, BHP, Australia; D Merritt, Department of Biodiversity, Conservation and Attractions, Australia*

Development of a predictive numerical model of water–rock interaction to estimate mining drainage water quality evolution from a waste dump located in northern Chile *N Ferrada, Amphos 21, Chile*

Environmental, social, and governance influences on closure cost provisioning and why we need a global standard for reporting closure financial liability *S Finucane, CDM Smith, Australia; K Beckett, Pershke Consulting, Australia*

Ready, set, close! Assessing social values and community readiness for closure *S Finucane, CDM Smith, Australia*

Tough lessons learnt through the project management lifecycle which can enhance effective mine closure strategy *N Flanagan, Turner & Townsend, Australia*

Mine reclamation in the Sahal region of Africa *L Ford, IAMGOLD, Burkina Faso*

Disruptors to mine closure planning and design: navigating operational dynamics and regulatory shifts *P Garneau, ATC Williams, Australia*

Rehabilitation process review: a high-level industry survey *R Getty, BHP, Australia*

Completion criteria: the tension between certainty and flexibility *C Gimber, N Shade, ERM, Australia*

Challenges in developing a mine closure management system for Brazil's National Mining Agency *F Gomes, H Pasti, J Carneiro de Jesus Neto, National Mining Agency, Brazil*

Looking backwards to look forward: palaeoclimate recreations and potential applications for mine closure *A Goto, Red Earth Engineering, Australia*

Integrating the global industry standard on tailings management principles into Queensland's progressive rehabilitation and closure plans *G Greening, ACT Williams, Australia*

Mine closure liability as an environmental, social, and governance concept: using a multi-dimensional approach to mine closure liability reduction *G Gregory, M Guerra, ERM, Canada*

Management and remediation of coal fly ash repositories: no longer sweeping the problem under the (grass) carpet *S Groves, Tetra Tech Coffey, Australia*

A new method to design post-mining landforms *G Hancock, The University of Newcastle, Australia; J Martín Duque, Universidad Complutense de Madrid, Spain; D Welivitiya, The University of Newcastle, Australia*

Groundwater nitrate as a potential contributing source of acid metalliferous drainage *T Harck, Hydro Geochem Group, Australia; P Weber, Mine Waste Management, New Zealand; W Gemson, Hydro Geochem Group, Australia*

Integration of progressive rehabilitation into tactical mine planning: a waste rock management case study *E Hari, J Lockwood, Mineral Resources, Australia*

Are we planning to be ready? Key considerations for developing the closure knowledge base to reduce closure risks *R Hattingh, WSP, Australia*

Offsetting infrastructure closure costs with optimised asset management *C Hermann, D Cannizzo, WSP, Australia*

Development of an ecosystem model for post-mining land use utilising a systems dynamics approach *P Hesketh, M Zevallos, ERM, UK; K Chichakly, isee systems, USA*

Techniques and challenges for material stabilisation within historically mitigated underground abandoned coal mines *D Hibbard, Brierley Associates, USA*

Underground abandoned coal mine mitigation in high-pressure artesian conditions *D Hibbard, Brierley Associates, USA*

Why your last closure cost estimate was wrong, and how to do better next time *K Hill, Piteau Associates, South Africa*

Understanding and managing groundwater impacted by historical mining beneath the city of Bendigo *M Hoban, Department of Energy Environment and Climate Action, Australia*

Missed opportunities: rethinking the value proposition for mine closure *L Holford, Hatch, Australia*

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Institutional, stakeholder and regulatory constraints to the redevelopment of mine sites to alternative employment-generating land uses: Hunter Valley case study *D Holmes, S Coakes, R Jaeger-Michael, Umwelt, Australia*

Assessment of erosion model performance using data from 12 arid-zone landforms *E Howard, Landloch, Australia*

Mine water as the catalyst to facilitate a just transition in South Africa's mining clusters *C Hudson, ERM, South Africa; P Hesketh, ERM, UK*

Sulphate management in a mountainous drainage system: a phased approach *S Humphries, SRK Consulting, Canada*

A comparative study on the performance of electro-osmotic consolidation of sand quarry tailings under constant voltage and constant current configurations *N Jayasiri, AB Fourie, C Vulpe, The University of Western Australia, Australia*

Closing a historical mine in a regional city *B Jenkins, EMM Consulting, Australia*

Bridging the gap: towards quantified mine closure criteria for mine waste facilities *E Joel, ATC Williams, Australia*

Optimising cover system performance with native vegetation at Mount Whaleback mine to minimise acid and metalliferous drainage risk: a research consortium approach *B Johnson, Okane Consultants, New Zealand; J Gale, R Mejia, BHP, Australia; E Veneklaas, M Leopold, The University of Western Australia, Australia; M Barteaux, Okane Consultants, Canada; M Phillip, Okane Consultants, USA; H Cooper, Okane Consultants, Canada; T Erickson, D Gibson, The University of Western Australia, Australia; M Clark, Okane Consultants, Canada; E Stock, L Terrusi, D Springer, BHP, Australia*

Reefton's globe pit remediation: using the five fundamentals of successful rehabilitation *J Johnson, PGG Wrightson Turf, New Zealand*

Residual void modelling for final closure landform risk reduction *L Johnston, WSP, Australia*

Options analysis to reduce solute loading from the Ranger tailings storage facility to surface water receptors *T Jones, INTERA, USA*

Satellite and drone imagery as tools for mine closure in the coal region of Criciúma, Santa Catarina, Brazil *F Junior, C Silva, F Perlatti, National Mining Agency, Brazil*

Challenges of mine closure as a tool for conciliating mining with local communities and conservation units in the Amazon *F Junior, F Gomes, H Pasti, J Carneiro de Jesus Neto, National Mining Agency, Brazil*

Use of two-dimensional thermal models and three-dimensional block modelling for assessment of permafrost conditions within the Whale Tail mine site *F Junqueira, WSP, Canada*

Tailings dam closure and declassification: closure optimisation with limited rehabilitation resources *A Kemp, P Chapman, WSP, Australia*

Remediating the non-mine: unique challenges to legacy management within a mining company portfolio *Z Kenyon, Rio Tinto, USA; D Leclerc, Rio Tinto, Canada*

Assessment of erosional stability for post-mining rehabilitation by the water erosion prediction project model: estimated versus measured erodibility factors and modelling efficiency *A Khalifa, SLR Consulting, Australia*

Island mining: a look at the planning to successfully close and rehabilitate Mount Gibson's Koolan Island mine *J King, Mount Gibson Mining, Australia*

Solar on closed mine sites *C Kling, BQ Energy, USA*

Experience with capping tailings storage facilities *K Koosmen, PSM, Australia*

Novel development of closure criteria: a unique look at seepage water quality for closure *T Kuzyk, ERM, Canada*

Risk management related to long-term mine gas emissions: feedback from French experience *S Lafortune, A Herbout, O Lefebvre, J Tardivon, P Bigarré, GEODERIS, France*

The renaissance of Rio Tinto's former industrial assets in France: enablers for successful post-mining transitions *C Latham, Rio Tinto, Australia*

Microbial diversity and plant cover in Tailings Storage Facility 1 at Philex Mines, Benguet, Philippines *JEH Lazaro, National Institute of Molecular Biology and Biotechnology, Philippines; EJ Sioson, University of the Philippines Diliman, Philippines; L Newsome, Sellafield Ltd, UK; M Tibbett, University of Reading, UK*

Square peg, geomorphic hole: applying geomorphic design principles to established tailings storage facilities *W Lee, H Thomson, SRK Consulting, Australia*

An Australian experience: a performance-based approach for selection of closure drainage design criteria and the climate change emission scenarios for tailing storage facilities *M Liu, Red Earth Engineering, Australia*

Geotechnologies usage in mining: contributions of an interactive and web-based geographic information systems platform to mine closure *E Lopes, Federal University of Lavras, Brazil; A Abreu, Imagem Geosistemas, Brazil; M Mendes, A Silva, Vale, Brazil; P Liberal, MCA Audit and Management, Brazil; G da Silva Vieria, Vale, Brazil*

Mine closure provisioning: a methodological approach *E Lopes, Federal University of Lavras, Brazil; M Castro, MCA Audit and Management, Brazil; B Dutra, A Queiroz, G da Silva Vieira, Vale, Brazil; JP Silva, MCA Audit and Management, Brazil; R Martins, IN Diniz, Vale, Brazil*

Using a landform evolution model to model the effect of extreme rainfall events on the geomorphic stability of a rehabilitated mine landform *J Lowry, M Saynor, Office of the Supervising Scientist, Australia; G Hancock, The University of Newcastle, Australia; T Coulthard, University of Hull, UK*

Assessment of extreme precipitation events under climate change scenarios in search of a resilient closure design *C Loyola, I Toro, R González, S Robles, WSP, Chile*

Building durable legacies: a holistic approach to closure design for mining landforms *S Mackenzie, E Smedley, Mine Earth, Australia*

A contemporary review of global regulatory requirements for mine landform cover design *G Maddocks, SLR Consulting, Australia*

Navigating divergent expectations: completion criteria and site relinquishment challenges in the Pilbara, Western Australia *S Malan, WSP, Australia*

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Are post-closure costs accurately predicted in the asset retirement obligation? A case study from Peabody Energy's Burton mine *JP Martin, Peabody Energy, Australia*

Geomorphic landform design and landscape evolution modelling for rehabilitation and closure of the Cerrejón mine, Colombia *J Martín Duque, M Tejedor, Universidad Complutense de Madrid, Spain; G Hancock, The University of Newcastle, Australia; A Gomez, CA Fuentes, LF Madrinan, JP Lozano, Carbones del Cerrejon Limited, Colombia*

The completion and monitoring of the LIFE RIBERMINE mine closure project (Spain and Portugal) and its transference to the abandoned mine rehabilitation program within the NextGenerationEU fund *J Martín Duque, M Tejedor, C Martín-Moreno, Universidad Complutense de Madrid, Spain; R Sanchez-Donoso, Vast, Sweden; JM Esbri, Universidad Complutense de Madrid, Spain; G Hancock, The University of Newcastle, Australia; J de la Villa, MA Solorzano, Regional Government of Castile-La Mancha, Spain*

The closure cost conundrum: how to light fires and get to know your chief executive officer *A Mauric, D Kyan, SRK Consulting, Australia; T Braun, JV Parshley, SRK Consulting, USA; R Mayne, SRK Consulting, Australia*

Integrating climate projections into water balance modelling for mine closure planning *D Maxwell, SLR Consulting, New Zealand; F Stark, N Kunz, SLR Consulting, Australia*

Argyle diamond mine: closure monitoring of a filling pit lake *C McCullough, Mine Lakes Consulting, Australia; S Sturgess, L Mills, Rio Tinto, Australia*

Guidance for mine waste disposal in pit lakes *C McCullough, Mine Lakes Consulting, Australia; D Castendyk, WSP, USA; M Schultze, Helmholtz Centre for Environmental Research GmbH, Germany; J Vandenberg, Vandenberg Water Science, Canada*

Carrapateena tailings storage facility: dust emissions study *C McNaughton, WSP, Australia*

Progress towards implementing a research agenda for post-mining transitions *T Measham, J Walker, F McKenzie, A Samper, D Brereton, G Boggs, CRC TiME, Australia*

Capturing the overburden storage area construction and post-construction periods when assessing performance of alternate source control strategies *G Meiers, WSP, Canada*

Enhanced preparedness for closure by applying the Global Industry Standard on Tailings Management to mine waste landforms *C Meikle, SLR Consulting, Australia*

Observations from a georesistivimeter for timelapse analysis (G.Re.T.A.) in a closed red mud facility *L Millington, I Bryson, Rio Tinto, Australia*

Reclamation of tin mining areas using biochar *A Möller, S Philip, Federal Institute for Geosciences and Natural Resources, Germany*

Lighthouse Projects: a strategic pathway to high value sustainable post-mining land use *A Morton, R Merz, enviroMETS, Australia*

A reflection on key drivers for longevity of a mine facing closure *M Mpanza, University of Johannesburg, South Africa*

Mapping tailings storage facilities associated with abandoned mine sites *M Mpanza, University of Johannesburg, South Africa*

Social and economic impact of mine closure: ghost town phenomenon and city resurrection in South Africa *AF Mulaba-Bafubiandi, LS Mogale, H Grobler, University of Johannesburg, South Africa*

Simulating long-term erosion equilibrium of a rehabilitated mine landform to evaluate the dynamics of land restoration *D Nair, S Bellairs, K Evans, Charles Darwin University, Australia*

A case study: an assessment of integrated geotechnical considerations during Hazelwood mine lake filling for mine closure using a reliability-based approach *S Narendranathan, K Kuang, Civil Mine & Quarry Geotechnics, Australia; A Moran, ENGIE, Australia*

Successful social transition planning for mine closure and a post-closure economy can be delivered through organised mining communities with a defined governance structure: a case of the Royal Bafokeng nation, North West province, South Africa *N Nxumalo, University of the Witwatersrand, South Africa*

101 (more) things to do with a hole in the ground: lessons from case studies of the social impacts of mine closure *E O'Keefe, Synergy Global Consulting, UK*

Bricks on the brink and clinker on tails: mine tails recycling at Kenya's Base Titanium *N Okello, Base Resources Limited, Kenya*

Rehabilitation and closure planning: the case of Base Titanium, Kenya *N Okello, Base Resources Limited, Kenya*

Stakeholder engagement and ecosystem services for mine site rehabilitation *Y Pan, S Duddigan, University of Reading, UK; MCE Devanadera, University of the Philippines Los Baños, Philippines; M Tibbett, University of Reading, UK*

Socioeconomic transitioning: Do we really understand what it takes? *JV Parshley, SRK Consulting, USA; H Van Vlaenderen, Vukani Social and Environmental Consulting, France*

Cultural reconnection in mine closure planning at Ranger mine *S Paulka, Energy Resources of Australia, Australia*

Capping of a soft coal tailings deposit using fly ash *D Pemberton, ATC Williams, Australia*

Integration of 'safe closure' into the selection of a new tailings storage facility *J Penman, Klohn Crippen Berger, Australia*

Considerations for 2D and 3D slope stability analysis for closure of a tailings storage facility *N Pereira, S Lines, Red Earth Engineering, Australia; A Arenas, ATC Williams, Australia*

Lessons learnt from a risk profile review of a legacy assets portfolio: a message from the future *IF Peters, D Berthelot, B Ayres, C Balasko, BHP, Australia*

From extraction to rehabilitation: a blueprint for sustainable mining in a changing climate *J Potgieter, E-TEK Consulting, South Africa*

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Improving closure readiness: a case of lessons learnt from a conceptual closure study on an Australian large-scale legacy mine site *T Prathidina, FR Hattingh, WSP, Australia*

A review of the DUB-GEM project and the applicability of drone-based gamma spectrometry in mine closure and rehabilitation *B Preugschat, Federal Institute for Geosciences and Natural Resources, Germany; C Kunze, IAF Radioökologie GmbH, Germany; B Wiens, Third Element Aviation GmbH, Germany; S Altfelder, Federal Institute for Geosciences and Natural Resources, Germany*

A digital solution for planning a roadmap for mine closure to achieve sustainable post-mining outcomes *MA Qureshi, CSIRO Mineral Resources, Australia; A Hammond, Central Queensland University, Australia*

Prescriptive versus outcome-focused mine closure regulation: recommendations for success *B Radloff, SLR Consulting, Australia*

Collaboration with the local community to implement sustainable reclamation projects in the mining area *A Rahma, M Maswahenu, MH Aditama, D Mahendra, AD Rahmandhana, A Amril, LN Setiawan Putra, SI Dewi Puspitasari, PT Amman Mineral Nusa Tenggara, Indonesia*

Prioritising risks for rehabilitation from a legacy of mining in Western Australia *T Read, Department of Energy, Mines, Industry Regulation and Safety, Australia*

The regulatory journey to improving mine closure success in Western Australia *D Risbey, Department of Energy, Mines, Industry Regulation and Safety, Australia*

The use of atypical growth media materials for the establishment of woodland habitat for mine site rehabilitation in Central Queensland *B Roddy, S Green Goldberg, Engeny, Australia; P Berghofer, BHP, Australia*

Rehabilitating and closing a coal tailings storage facility in Central Queensland, Australia: a nonconventional approach based on ecological engineering of pedological processes *B Roddy, Engeny, Australia; L Huang, The University of Queensland, Australia; C Lockhart, BHP, Australia*

Barrier cover trials at Rosebery mine *T Rohde, H Vogler, SGM Environmental, Australia; J Crosbie, MMG Limited, Australia*

Achieving cost-effective mine closure *M Ryan, Umwelt, Australia*

Early warning prediction of revegetation outcomes before mine closure *R Sadler, C Mounsey, Millcrest Environmental Technology, Australia*

Case study: Selbaie mine, Quebec, Canada *C Salewich, B Ayres, BHP, Canada*

Application of integrated mine closure to BHP's legacy mine sites in North America *C Salewich, C Reid, BHP, Canada; IF Peters, BHP, Australia; J Saran, B May, BHP, USA; B Ayres, BHP, Canada*

From waste to engineered growth media *E Salfate, L Robertson, M Esmi, WSP, Australia*

Risk-informed closure design at the Hidden Valley mine, Papua New Guinea *J Sanders, A Poole, Klohn Crippen Berger, Australia; S Wakefield, S Watson, Klohn Crippen Berger, Australia*

Development of a ground control management plan and framework for safe access for a legacy open pit mine in the Northwest Territories, Canada *L Sandve, M Banda, WSP, Canada*

Adherence index to integrated mine closure planning: a new approach for evaluating iron mine closure plans *C Santos, EY, Brazil; M Leite, H Lima, Federal University of Ouro Preto, Brazil; E Brandt, Brandt Meio Ambiente, Brazil*

Monitoring for pit lake planning, filling and end use: Why? When? What? *M Schultze, Helmholtz Centre for Environmental Research, Germany; J Vandenberg, Vandenberg Water Science, Canada; D Castendyk, WSP, USA; H-P Schleussner, LMBV, Germany; C McCullough, Mine Lakes Consulting, Australia*

Harnessing InSAR technology for effective mine closure monitoring *J Scoular, J Pretorius, J Salzer, SkyGeo, The Netherlands*

Monitoring results of topsoil and subsoil stockpile characteristics which will be used in rehabilitation for mine closure: a case study at Oyu Tolgoi *D Shamii, Ulzii Environmental Consulting, Mongolia; T Oyun-Erdene, P Nergui, D Batsuuri, Oyu Tolgoi LLC, Mongolia; U Dagdandorj, Ulzii Environmental Consulting, Mongolia; B Boldgiv, National University of Mongolia, Mongolia; A Balt, Oyu Tolgoi LLC, Mongolia*

A performance-based approach for calibration and prediction of fine tailings settlement for closure design *T Sharp, C Han, M Llano, E Baker, Red Earth Engineering, Australia*

Enhancing mine closure outcomes: implementing towards sustainable mining protocols in the Australian mining sector *R Short, M Lockwood, SLR Consulting, Australia*

Improving probabilistic predictions of post-closure groundwater solute loads for Ranger Uranium Mine *J Sigda, A Askar, T Jones, J Pickens, INTERA, USA; S Paulka, I Harvey, R Stockdale, Energy Resources of Australia, Australia*

Integrating the sustainable development goals into post-mining land-use selection *G Simpson, WSP, Australia; K Ferguson, N Slingerland, WSP, Canada; R Hattingh, WSP, Australia*

Diavik's closure journey: a case study in integrated mine closure planning, community and regulatory engagements, and progressive reclamation *S Sinclair, Rio Tinto, Canada*

Diavik's north country rock pile: a case study in integrated mine closure planning and progressive reclamation *S Sinclair, Rio Tinto, Canada*

Diavik's processed kimberlite containment facility: a case study in integrated mine closure planning and progressive reclamation *S Sinclair, Rio Tinto, Canada*

Closure landform potential of commingled tailings and waste rock *N Slingerland, WSP, Canada; D Barsi, University of Alberta, Canada*

Closing the gap: closure cost estimation trends and pathways to improved maturity *N Slingerland, WSP, Canada; J Sanders, Klohn Crippen Berger, Australia; D Murphy, WSP, Australia*

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ACCEPTED ABSTRACTS*

Queensland's abandoned mine land program: improving the way we manage abandoned mines in Queensland *A Stones, K Fogarty, A Friend, T Hall, A Grabski, Department of Resources, Australia*

The Collingwood Tin abandoned mine remediation case study, Far North Queensland *A Stones, K Fogarty, A Friend, T Hall, A Grabski, Department of Resources, Australia*

Argyle diamond mine closure: drone seeding for successful revegetation *S Sturgess, L Mills, Rio Tinto, Australia*

Case study: the financial benefit of the implementation of concurrent rehabilitation (owner fleet versus contractor) *J Taljaard, L Koekemoer, C van Staden, E-TEK Consulting, South Africa*

Friend or foe? The importance of considering changes in redox conditions following mine closure *M Thienenkamp, SLR Consulting, Australia*

Development of a safety case for a closed tailings storage facility in the tropics *J Thorp, J Herza, HATS Consulting, Australia*

Can deep eutectic solvents and organic acids be used to mobilise copper from tailings while providing a pathway towards rehabilitation? *M Tibbett, S Duddigan, V de Oliveira, University of Reading, UK*

Survival of arbuscular mycorrhizal inoculum in coal mine spoil in the presence of eucalyptus host *M Tibbett, T Edmonds-Tibbett, University of Reading, UK*

Keeping it consistent: a standardised tool for developing closure completion criteria *C Tomlin, C Gimber, ERM, Australia; R Barritt, Rio Tinto, Australia*

The importance of mine closure and care and maintenance planning throughout the life of mine *N Tucker, Department of Energy, Mines, Industry Regulation and Safety, Australia*

A closing attempt of challenging gold exploration legacy sites for three decades: be careful what's prospected for… *F van Wyk, Agreenco, South Africa*

Closure plan of the Fimiston Open Pit (Super Pit), Kalgoorlie *J Vermaak, Groundwater Resource Management, Australia*

Social outcomes following mine closure: an abundance of good intention undermined by a lack of leverage *L Wall, Shared Resources, Australia*

Don't let the tail(ings) wag the mine: guiding tailings storage facility closure designs for compliance *J Walls, SRK Consulting, South Africa*

Improving landform design using analysis of high-resolution survey data from constructed linear and geomorphic landforms in New South Wales, Australia *C Waygood, S Dressler, WSP, Australia*

Tailings in the long-term: closed facilities in a post Global Industry Standard on Tailings Management world *W Weinig, P Crouse, Stantec, USA*

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The power of collaboration and realism in social transition planning: a better foundation for success in remote Australia *C Wilson-Clark, WSP, Australia; G Macmillan, Rio Tinto, R Winn, C Martinez, WSP, Australia*

Considering groundwater-dependent ecosystems in closure planning *D Windle, T Weaver, H Pawley, ERM, Australia; C Tolsma, EnergyAustralia, Australia*

Application of artificial intelligence recognition model methods in the analysis characteristics of closed/abandoned mine resources *J Dong, X Feng, China University of Mining and Technology, China; L Wang, F Liu, China Coal Society, China; B Genc, University of the Witwatersrand, Johannesburg, South Africa*

*Correct as at 14 April 2024. See acgmineclosure.com for updates.

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Professor of Civil & Mining Engineering and Program Director – Future Tails
The University of Western Australia

Professor Mark Tibbett
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University of Reading, UK

ASSOCIATED EVENT

Monitoring for Safe Closure Workshop
25 November 2024 | The Westin Perth, Perth, Western Australia

Professor Andy Fourie - Workshop Facilitator
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