

THE ROLE OF ACMER - A MEMBER OF THE INAP GLOBAL ALLIANCE

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AUSTRALIAN CENTRE FOR MINERALS EXTENSION AND RESEARCH (ACMER)

- Background
- Mission
- Centre Structure
- Research Program
- Technology Transfer Program
- Conclusions



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BACKGROUND

- Non-profit, industry-initiated Centre
- Evolved to meet the needs of the minerals industry, which is embracing the principles of sustainable development as espoused by ICMM
- Focus has broadened to encompass social as well as environmental elements of sustainable development
- Increased emphasis on technology transfer and training to meet industry needs



ACMER MISSION

- To provide the scientific and technological rigour and support to enable the minerals industry to plan, operate and close mines in an environmentally and socially responsible manner



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ACMER OBJECTIVES

- To work with industry, government, researchers and the community to define key environmental and social issues facing the minerals industry from exploration through to mine closure.
- To focus the collective skills of research organisations nationally (and internationally where appropriate) to produce technical solutions to the key issues identified by industry and relevant stakeholder groups.



ACMER OBJECTIVES (cont'd)

- To ensure effective national and international transfer of research outcomes and key environmental and social technologies through -
 - short courses and workshops
 - research reports, workshop proceedings and handbooks
 - advisory services.



ACMER BOARD

INDUSTRY MEMBERS

- AngloGold Ashanti Australia Limited
- BHP Billiton Limited
- Minerals Council of Australia (MCA)
- Newmont Australia Limited
- Placer Dome Australia Limited
- Rio Tinto Limited



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ACMER BOARD (cont'd)

GOVERNMENT MEMBERS

- Ministerial Council on Mineral and Petroleum Resources (MCMPR)
 - Australian Government Department of Industry, Tourism and Resources (DITR)
 - State and Territory Departments of Mines and Energy
- Australian Government Department of the Environment and Heritage (DEH)
- Queensland Department of Natural Resources and Mines



ACMER BOARD (cont'd)

RESEARCH MEMBER

- Chair of the Research Consultative Committee, which includes research organisations with which ACMER has a Memorandum of Understanding (MOU)
- MOUs with
 - ANSTO
 - CSIRO
 - Curtin University of Technology
 - University of Queensland
 - University of Western Australia



CENTRE ACTIVITIES

Mission being achieved through –

- Research program
- Technology transfer program
- Training
- Advisory service



OPERATIONAL RESEARCH PROGRAMS

- Waste Rock Dump Stability
- Final Void Use
- Tailings Disposal and Remediation
- Acid Mine Drainage Prevention and Remediation
- Mine Water Management
- Ecosystem Reconstruction Processes and Strategies



ACID DRAINAGE-RELATED RESEARCH ACTIVITIES OF ACMER

- Identification of the extent of AD in Australia
- Documentation of future research needs
- Development, and management of 10 projects since 1997
- Currently three AD-related projects



INVESTIGATION OF RUM JUNGLE WASTE ROCK COVER DETERIORATION

- Recommendation from ACMER Managing Sulfidic Mine Wastes (Stage 1) Report (2000)
- Developed and managed by ACMER and undertaken by ANSTO and CSIRO
- Final report completed 2003
- INAP major sponsor



RUM JUNGLE



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CURRENT AD-RELATED PROJECTS

- Store-Release Covers for the Long-Term Containment of Mine Waste - The Role of Vegetation (Stage 2)
- Standard Protocols for the Long-Term Prediction and Monitoring of Mine Lake Water Quality
- Robust Guidelines and Assessment Procedures for Metal-Contaminated Sediments



TECHNOLOGY TRANSFER PROGRAM

OBJECTIVES

- Increase awareness and knowledge of good practice environmental and social management in the context of sustainable development through short courses and workshops
- Communicate the results of ACMER (and other) research projects to the industry, government and community through workshops and published reports
- Identify future research and technology transfer needs on environmental and social issues via workshops



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TECHNOLOGY TRANSFER PROGRAM (cont'd)

- Covers both environmental and social issues relevant to the minerals industry from exploration to closure
- Contract with MCA to conduct extension program focusing on sustainable development operational framework developed from ICMM principles
- Short courses and workshops
 - Conducted regionally
 - Moving to flexible delivery with and without accreditation
 - National and overseas (S.E. Asia, South Africa)
- Production of videos, manuals and guidelines



ACMER TECHNOLOGY TRANSFER ACTIVITIES RELEVANT TO ACID DRAINAGE

- Short courses and workshops
- Website
- Leading Practice Sustainable Development Program
- MCMPR Abandoned Mines Program



ACMER SHORT COURSES AND WORKSHOPS (2005)

- Total of 3 short courses and 10 workshops
- AD-related courses/workshops included -
 - Practical Monitoring for Improved Environmental Management in Mining (SC)
 - Sustainable Mine Closure - Fact, Fiction of Financial Liability? (W)
 - Fifth Australian Workshop on Acid Drainage (W)
 - Environmental Management for the Minerals and Quarrying Industries (SC)



AD-RELATED COURSES AND WORKSHOPS FOR 2006

- Practical Monitoring for Improved Environmental Management (SC)
- Cyanide Management for the Gold Industry (W)
- Risk Assessment and Management for Sustainable Mine Closure (W)
- Tools for Improved Mine Water Management (SC and W)
- Materials Characterisation for Effective Mine Planning and Environmental Management (SC)
- Principles and Practice of Mine Rehabilitation (SC)



WEBSITE

- Lists ACMER research reports and courses/workshops relevant to AD (and other areas)
- Details of proceedings of workshops and other publications
- Links to INAP and Global Alliance Partners
 - Acid Drainage Technology Initiative (ADTI) (USA)
 - Mine Environment Neutral Drainage (MEND) Program (Canada)
 - Partnership for Acidic Drainage Remediation in Europe (PADRE)



LEADING PRACTICE SUSTAINABLE DEVELOPMENT PROGRAM FOR THE MINING INDUSTRY

- Continuation of the Best Practice Environmental Management in Mining Program (1995-2003)
 - Department of the Environment and Heritage and mining industry
 - 24 booklets including “Managing Sulphidic Mine Wastes and Acid Drainage”
- Booklets being reviewed and scope broadened to provide sustainable development focus



LEADING PRACTICE SUSTAINABLE DEVELOPMENT PROGRAM FOR THE MINING INDUSTRY (cont'd)

- Steering Committee formed September 2005
 - MCMPR (Commonwealth Department of Industry, Tourism and Resources, and State and Territory Departments of Mines and Energy)
 - Department of the Environment and Heritage
 - Minerals Council of Australia (MCA)
 - ACMER



LEADING PRACTICE SUSTAINABLE DEVELOPMENT PROGRAM FOR THE MINING INDUSTRY (cont'd)

- Booklets to be produced in 2006
 - Community Engagement and Development
 - Land Rehabilitation and Revegetation
 - Sustainable Mine Closure
 - Materials Stewardship



MCMPR ABANDONED MINES PROGRAM

- ACMER conducted workshop in November 2003 on Management and Remediation of Abandoned Mines
 - Recommendation to establish national approach to the issue
- ACMER submission to MCMPR urging national approach (2004)
- MCMPR establishes Abandoned Mines Working Group consisting of MCMPR, ACMER and MCA representatives (October 2005)
- MCA releases policy on abandoned/derelict mines



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MEMBERSHIP OF INAP GLOBAL ALLIANCE

- Benefit from sponsorship of research
 - Rum Jungle Waste Rock Dump Cover Project (2002-2003)
 - Store-Release Cover Design - Role of Vegetation (Stage 1 Review) (2004)
- Sponsorship of 6th ICARD organised by ACMER and AusIMM



MEMBERSHIP OF INAP GLOBAL ALLIANCE (cont'd)

- Fifth Australian Acid Drainage Workshop (August 2005)
 - INAP input to program and sponsorship
- Participant in Global Alliance Meetings
 - Technology transfer
- Participant in INAP working group on Global ARD Guide
 - Workshop in Vancouver (December 2005)



CONCLUSIONS

- As a non-profit, industry-initiated Centre, ACMER is assisting the minerals industry meet the challenges of sustainable development through research, technology transfer, training and advisory services
- Broader charter through the strategic partnership with MCA facilitates the integration of environmental and social aspects of both research and technology transfer



CONCLUSIONS (cont'd)

- The Centre has had substantial research and technology transfer activity on AD over the past 8 years
- Partnership in the INAP Global Alliance has directly enhanced the research and technology transfer AD activities of ACMER and facilitated exchange of information with other partners
- ACMER's links with groups in S.E. Asia and China may assist in the extension of the INAP Global Alliance to those regions



THE END



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