

Alan Burgess is a qualified Mining Engineer with over 20 years of operations and project experience. Extensive operations expertise in mineral processing, mine planning and staff supervision is coupled with experience in process engineering projects in concentrate, tailings and water. Alan has a reputation for delivering results and successfully leading expert teams to resolve technical challenges and deliver successful and safe projects.

## Tailings engineering and design experience

Alan has in depth engineering experience and good concept and theoretical abilities in tailings facilities design. Alan's design methodology and approach are grounded in principles of defining the key design drivers of liquor or water balance, tonnage and storage requirements and environmental drivers such as geochemistry and seepage fate, dusting and the long term closure plans.

A representative list of projects includes:

- Engineering lead for the new TSF5 storage facility at Olympic Dam from identification stages to commissioning and operations handover
- Principal Tailings Engineer for the Olympic Dam expansion studies involving data collection and test programs ie, geotechnical and geochemistry studies, design, engineering and estimates
- Principal Tailings engineer as well as Lead on the water and mining studies for development of the Yeelirrie uranium deposit (identification and selection studies)
- Design and construction of a new dam for storage of the wash plant fines at Peak Downs mine
- Operations interface for the design, construction and commissioning of the Laguna Seca tailings facility at the Escondida mine. Due to the ability to communicate in Spanish, was also directly involved with the design team; Klohn Crippen
- Planned the mine paths and the tailings stacking at BHP NZ Steel's mine sites at Waikato North Head and Taharoa

A representative list of mines and projects in which Alan has worked include:

- Olympic Dam, SA - Copper, uranium, gold and silver)
- Yeelirrie, WA - uranium
- Peak Downs, QLD – metallurgical coal
- Escondida, Chile – copper, gold
- BHP New Zealand steel – iron ore

Others include Mt Isa (lead, zinc), Kloof Gold mine, RSA – gold; and Huntly and Strongman collieries in NZ – coal.

## **Project Management experience**

Alan has wide involvement in various roles in large and small projects:

- Seconded Project Manager and undertook the engineering, construction and commissioning lead roles for delivery of a new Tailings Storage Facility (TSF5) and tails delivery (TDU) project (\$250M total) at Olympic Dam. The combined projects had a commendable safety record with a TRIFR of 2.3 and were under budget and ahead of schedule.
- Tailings Retention System design lead for the proposed expansion of the OD mine
- Manager Tailings, Water and Mining for the Yeelirrie uranium project concept study
- Design and construction of a coal fines dam at Peak Downs
- Managed the \$70M pa prestrip contract for 3 years and with a team approach, decreased the safety CIFR from 15 to 4 in this time.
- Operations interface at Escondida, included the Monturaqui wellfield project and the Phase IV expansion
- Design and delivery of a new dredging method at BHP NZ Steel Taharoa mine site

Successful delivery of small projects:

- Renovated and compliant overpass over the Peak Downs Highway
- Temporary tailings system to continue production at Escondida
- Solve reliability issues in the Escondida concentrate pipeline

## **Education and Training**

Alan holds a Bachelor of Mineral Technology (Hons) in Mining from the University of Otago (NZ) and a Postgraduate Diploma (Associate of Otago School of Mines). Further professional development, includes:

- Business Administration diploma in Marketing (Massey University – NZ)
- Diploma in Business Frontline Management

## **Proposition**

“My belief is that to achieve the best outcome in a project and especially a tails system is to obtain all the design drivers such as environmental and regulatory factors, production and water balance demands as well as the material characteristics. These factors must be defined early on to ensure they form the scope of the project. This must be signed off by the key stakeholders. I maintain that project delivery success is underpinned by the ability to foster an environment of collaboration and professionalism between stakeholders and Contractors in spite conflicting goals and the unexpected”.