



Industrial Systems

Industrial Wastewater Treatment

Client

Xstrata Coal

Location

Tahmoor, NSW

Integrated Water Management Strategy New South Wales

CH2M HILL was commissioned as Owners Engineer for an Xstrata Coal Mine Water Zero Discharge project incorporating dual membrane desalination technology (UF/RO) and RO brine management system. The Owners Engineer role encompassed the provision of independent advice, review of all client project background information, preparation of scope of work for the tender brief, tender specification and associated tender documentation, the development of capital and operating expenditure for the zero discharge project, peer review and update clients mine water and salt balance, liaison with selected technology tenderers, development of the project plan and option assessment, including definition of the life cycle costs and greenhouse gas impact of the various alternative brine management system options.

Work to date has included:

- Reviewed RO Technology Selection/ Risk, Developed Typical Mine Drainage Water Recycling Plant (MDWRP) Process Schematic, Plan and Isometric View & Developed MWDRP Staging Options
- Peer Reviewed and Updated Client Mine Water and Salt Balance Model
- Detailed Project Development Schedule and provided options for Project Delivery Models Model Philosophy & Capital Cost Estimates for the 5 Staged Project Delivery Options
- Reviewed Brine Disposal Options including Trucking/ Disposal to Ocean Outfall versus Mechanical Evaporation &/or Crystallisation together with GHG Assessment
- Prepared Integrated Water Management Strategy & as part of this strategy developed concept design for Surface Water Consolidation project. Recently completed the detailed design and currently selecting and managing construction contracts for completion of the scheme