

**Barriers to the Adoption of EMS
at Australian Minerals and Energy Operations**

	Open Pit/Alluvial Mining Operation	Large Surface Mining Operation	Service Provision Company	Electrical Supply Company	Industrial Minerals Operations	Electrical and Gas Supply Company	Mining Exploration Company
Changes arising from EMS not initially seen as helpful. It attempted to change management practices & corporate culture (causing cultural resistance)	●	●	●	●			●
Limited EMS ownership at lower organisational level (due to lack of information and understanding)	●		●	●			●
Operation not fully recognizing business opportunities of credentials of having EMS (through own limitations or external forces e.g. government policy)			●	●			●
EMS implementer seen by operators as EMS owner		●	●		●		
Focus on doing EMS right rather than asking whether it was the right thing to do – absence of clear mission for EMS and too much emphasis on awards and recognition for operation			●	●			●
Inability of ISO 14001 certifying bodies to support the organisation to go beyond certification and fully integrate EMS into business planning			●	●		●	
Limited Senior Management understanding of EMS & commitment to it	●	●	●				
Over emphasis on software aspects of EMS		●			●		
Fear of missing certification (to ISO14001) became a prominent driver			●	●			
Use of jargon by implementers alienated potential EMS users			●		●		
Limited understanding of how operations people shared knowledge		●	●				
EMS was not perceived as relevant for the site			●				●
Senior Management not including public perception in assessing risks				●			
Differences in regulatory requirements between geographical locations							●
Lack of resources	●						
Lack of objective performance standards	●						