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**The Influence of Coal Seam Water Composition upon Electrocoagulation Performance
Prior to Desalination**

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EC was investigated to ascertain its applicability to remove dissolved species from a variety of associated water samples typical of coal seam gas (CSG) operations. The hypothesis was that the CSG water composition may impact EC performance for the removal of problematic species such as alkaline earth ions and dissolved silicates. Bench top studies of a range of CSG associated water samples revealed that the greater total salinity (conductivity from 5290 to 15680 $\mu\text{S}/\text{cm}$) the less alkaline earth ions were removed. However, dissolved silicate remediation maintained high efficiency (89.5 to 98.0 %) regardless of water salt content. Residual aluminium was present in treated water when aluminium electrodes were employed (4.6 to 39.0 mg/L) and correlated with increasing solution pH. In contrast, steel electrodes did not result in notable residual iron. Whether steel or aluminium electrodes were optimal

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