fraction of the costs of remediating mine sites, and it is comparable with the costs of properly managing the acidification of agricultural soils, but the area of mine wastes is considerably less than the area of naturally occurring acid sulphate soils.

7 Conclusions

The OSS/ACMRR study into the extent of acid mine drainage in Australia has enabled information to be collected from a large number of mine sites and indirectly raised the awareness of the need to properly manage sulphidic materials at mine sites. The information collected and the comments received show that the management of sulphidic materials is an important environmental issue for the Australian mining industry.

Based on information collected during the OSS/ACMRR study, the additional operational cost on properly managing sulphidic mine wastes at Australian mine sites has been estimated to be about $60 million per year to the whole Australian mining industry. This cost is a very small fraction of the total annual costs of the Australian mining industry, but a significant proportion of the amount spent on environmental issues.

Potentially acid generating mine wastes can present a significant financial risk to mine owners. Historic sites like Mt Lyell, Rum Jungle or Mt Morgan demonstrate the scale of the environmental impact if the mining of sulphidic materials is not properly managed. Problems at these sites include acid generating mine wastes, acid water flowing from adits and opencuts containing acid polluted water. To minimise the financial risk, mining companies should characterise wastes for their acid generating potential and develop and implement appropriate mine plans and waste management strategies. Clearly it is important to identify the additional costs of managing any sulphidic material early when mine feasibility is being assessed.

Despite good work being undertaken at many mine sites, there are sites where the significance of sulphidic wastes is not fully appreciated and staff are having difficulties developing appropriate waste management strategies. This study identified a need to improve the level of knowledge and awareness of acid drainage issues at mine sites in Australia and to assess the long-term effectiveness of strategies being used for managing sulphidic wastes at Australian mine sites.

Acid mine drainage and acid rock drainage are important environmental issues for the Australian mining industry. An appropriate waste management strategy is essential at all sites mining sulphidic materials to ensure that acceptable levels of environmental impacts are achieved.

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