



*A COMMERCIAL APPLICATION OF  
VIROMINE™ TECHNOLOGY*

## CASE STUDY LARGE COAL MINE, NEW SOUTH WALES

*ViroMine™ Technology was successful in treating  
the holding and attenuation dam wastewater to  
levels suitable for its reuse in washing coal tailings*



Virotec was contracted by a large coal mine to implement ViroMine™ Technology at a facility in the Hunter Valley region near Kearsley in New South Wales. The objective of the application was to treat a 5.0 ML holding and attenuation dam, primarily to reduce high iron concentrations and to raise dam pH, thereby allowing for the treated dam water to be used to wash coal tailings.

The results presented in Table 1 show that ViroMine™ Technology successfully raised dam water pH to within regulatory limits, and reduced both iron and zinc to levels suitable for reuse of the dam water.

**TABLE 1: TREATMENT OUTCOMES AS A RESULTS OF APPLYING ViroMine™ TECHNOLOGY TO THE COAL MINE HOLDING DAM WASTEWATER**

Parameter	Dam Water Before Treatment	Dam Water After Treatment with ViroMine™ Technology	Required Limits for Water Reuse
pH	5.9	7.7	7.0-8.0
Iron (mg/L)	966	<0.005	2.0
Zinc (mg/L)	0.13	<0.01	NA
Zinc (mg/L)	0.68	0.002	0.006

## CONCLUSION

ViroMine™ Technology was successful in treating the holding and attenuation dam wastewater to levels suitable for its reuse in washing coal tailings. Results indicate that iron was decreased from 966 mg/L to 0.83 mg/L, a 99.9% reduction, zinc was reduced from 0.13 mg/L to <0.01 mg/L, a 93% reduction, and pH was raised from 5.9 to 7.7, with all treatments meeting target limits.



*The holding dam which was treated by ViroMine™ Technology at a large coal mine in New South Wales, Australia*



*The Virotec operations team pumping contaminated holding dam water to the treatment facility (rear)*

© 2011 Virotec Global Solutions Pty Ltd. All rights reserved.  
743/MKT/11 12.12.11

[virotec.com](http://virotec.com)