

December 2010 Update

# Gilt Edge Mine

Operable Units 2 and 3

Lawrence County, South Dakota

(Five-Year Review date: April 10, 2007)

## *H*ighlights since the 2007 Five-Year Review

- Analytes measured in effluent as of August 2008.
- Ammonia performance standards have changed and will be reported in weekly and monthly reports as of August 2008.
- Ruby Cap leakage study leads to grout injections in bedrock fractures. Work to begin June 2009.

## Issues & Recommendations Update

Issues	Recommendations/ Follow-Up Actions	Follow-Up Actions (Status/ Due Date)	Status of Follow-Up Action December 2010	Responsible Party
1) Occasional exceedence of applicable State Surface Water Quality Standards (OU2) including temperature, total suspended solids and nitrate.	Continue monitoring	NA	After August 2006 there was one exceedence of temperature, one exceedence of TSS, and there have not been any exceedences of nitrates after August 2006.	EPA
2) Alkalinity, weak acid dissociable cyanide, total cyanide, chromium VI and dissolved mercury not measured in water treatment facility effluent during most or all the monitoring period.	Improve monitoring program	September 2007	Complete 9/2008. Analytes now measured in effluent.	EPA

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<p><b>3) Detection limit for weak acid dissociable (WAD) cyanide is twice the water quality standard</b></p>	<p>Revise analytical detection limits.</p>	<p>September 2007</p>	<p>The Practical Quantification Limit (PQL) of WAD cyanide analysis, 0.010 mg/l, is twice the chronic water quality standard. No analytical technique for site water is available that provides a lower detection limit.</p>	<p>EPA</p>
<p><b>4) New effluent standard for ammonia. The standard is calculated using equations in Appendix A referenced in § 74:51:01:49.</b></p>	<p>Revise performance standards</p>	<p>September 2007</p>	<p>Complete 9/08. Performance standards for ammonia have changed and will be reported on all subsequent weekly and monthly reports.</p>	<p>EPA</p>
<p><b>5) Clean water diversion ditches may discharge to waste rock mass due to suspected leaky channel liner, unlined fractured bedrock ditches and sediment dams in the ditches.</b></p>	<p>Consider repair to suspected leaking channels</p>	<p>September 2008</p>	<p>A study to evaluate the amount of leakage in Ruby Cap diversions was completed. Grout will be injected into the bedrock fractures to reduce leakage. Work to be complete 11/11</p>	<p>EPA</p>

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<p><b>6) ROD required site-specific toxicology study of sulfate Total Dissolved Solids (TDS) has not been performed.</b></p>	<p>Conduct study</p>	<p>September 2008</p>	<p>It was decided not to perform toxicity studies for sulfate and TDS since the State water quality program would not consider this information in setting stream standards for these parameters.</p>	<p>EPA</p>