

We were associated with a heap leach mining operation where crushed heaps are irrigated with a cyanide solution to leach silver into solution. The process recycles bore water in the silver leaching circuit and the constant consumption and application of anti-scaling chemicals was something we were aiming to either reduce or eliminate from the process if at all possible.

Based on the information provided, and results showing up during application at other mines and industries, Hydrosmart technology was considered for use in treating the process water to be used for the irrigation of the heaps. The aim was to reduce or stop calcium gypsum build up from forming in the pipes and sprinkler heads during the recovery process.

A bench trial was conducted in late 2009 on the use of a Hydrosmart by applying the unit to a leach slurry. This was found to produce no conflicts in the process, based on which it was decided to proceed to a full site trial in early 2011 at a Queensland mine site. The level of scale build-up in the system was directly monitored by a scale coupon (probe) installed in the 250 mm HDPE leach solution supply pipe. From this we were able to observe and monitor the level of scale build up and it was soon evident that the scale propensity had improved due to treatment.

No solid scale formed on the coupon, whereas usual behaviour was that without the addition of antiscalent chemicals, significant scaling would form and be visual within a matter of days. This beneficial behaviour continued, and whilst the nearly 2,000 ppm TDS water being pumped was now milky in colour, there was no longer the build up and blockage issues we had been experiencing otherwise.

As a result the Hydrosmart Minemaster units have been retained on site and are in constant operation.

I am pleased with the outcomes of the Minemaster in sustainably solving the problem.

Regards

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