FINAL COMPLETION REPORT

Harmony Doornkop Gold Plant

Introduction

This Final Completion Report presents the evidence to support the successful implementation of the Corrective Action Plan to correct the deficiencies identified in the ICMI certification audit of Harmony Doornkop Gold Plant, held from 12th – 16th April 2010.

Corrective Action Plan - 1

Principle 3 – Handling and Storage: Protect workers and the environment during cyanide handling and storage

Handling and Storage Practice 3.1 Design and construct unloading, storage and mixing facilities consistent with sound and accepted engineering practice and employing quality control/quality assurance procedures and spill prevention and containment measures.

Deficiencies

- The current cyanide dosing ring main has historically caused problems with leaks which have been exacerbated by the presence of a lagging system to prevent freezing, which has further complicated the management and decontamination of leaks. The plant had already commenced plans and risk assessments to replace the system before the audit. The auditors were concerned about some of the unsatisfactory physical conditions (crystallisation around the pipe lagging) relating to the ring main system and agreed that this significant deficiency would be addressed by the replacement of the ring main system.

Corrective Actions

A project was initiated and a fully re-designed cyanide dosing system including new peristaltic pumps with new, unlagged, cyanide lines to be installed within secondary containment.

Evidence presented to Auditors

- Photographic evidence of the completion and commissioning of the re-designed cyanide dosing system which includes a new peristaltic pump with new, unlagged, cyanide lines, installed within secondary containment. The new cyanide dosing system is an automated mass flow system which consists of tank 38, a slurry pump, leach tank 6&7, flow meter, density meter, peristaltic pump, cyanide titration machine and a Programmable Logic Controller (PLC). As the slurry is being transferred from tank 38 to

leach tank 7, flow and density are measured, mass flow is calculated and auto titration machine takes a sample from leach tank 6 and deduces the amount of cyanide in the head tank. A signal of the calculated mass and the concentration of cyanide in the head tank is sent to the PLC which regulates the peristaltic pump to increase or decrease the flow rate of cyanide into leach tank 7. The flow rate of cyanide is adjusted until a head cyanide set-point of 180 ppm is achieved. To allow proper mixing of cyanide, dosing takes place at leach tank 7 and a sample is taken at leach tank 6.

- The decommissioning and safe disposal of the old cyanide ring main system was evidenced by the scope of work, and procedural HAZOP undertaken jointly by the site and the specialist decommissioning contractor, and a range of photographs of the activities.

Corrective Action Plan - 2

Principle 8 – Training: Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

Training Practice 8.2 Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

Deficiencies

- The whole Harmony Group training system was changed from a historically less formal training structure to a formal structured and well planned system, referencing national unit standards relating to metallurgy. Although the old system ensured competency, the process of training the staff in the revised standards and procedures which are Cyanide Code compliant, is in its early stages of retraining. There are currently insufficient records and follow up observations to demonstrate the competency of the staff in the new systems and procedures.

Corrective Actions

- The Harmony Group Training structures, along with the various plant trainers, have planned to complete the training and the appropriate planned task observations.

Evidence presented to Auditors

Evidence sighted by the auditors to confirm the corrective actions have been implemented effectively:-

- Samples of signed training session attendance registers of various plant departments indicating training on the new procedures.
- The Doornkop Plant Training Plan Matrix indicating the new procedures and the various dates that individual employees undertook appropriate training in the new procedures.
- Samples of competency assessments and Planned Task Observations (PTOs) undertaken after training in the new procedures to check competency and application.

Conclusion

The Lead Auditor is satisfied that the corrective actions taken, meet the requirements of the corrective action plans and thus enable substantial compliance in these operations and training practices to be revised to Full Compliance.

Arend Hoogervorst
Lead Auditor

Date: 12th April 2011