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## **FINAL COMPLETION REPORT**

### **Harmony Evander Kinross Gold Plant**

#### **Introduction**

This Final Completion Report presents the evidence to support the successful implementation of the Corrective Action Plans to correct the deficiencies identified in the ICMI certification audit of Harmony Evander Kinross Gold Plant, held from 15<sup>th</sup> – 19<sup>th</sup> March 2010.

#### **Corrective Action Plan - 1**

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

**Handling & 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 unloading and storage facilities include a liquid sodium cyanide tank and two redundant, flake cyanide tanks. These facilities are 40 years old and are not fully Code compliant. Compliance weaknesses include secondary containment, end of life issues and outdated design.

#### **Corrective Actions**

- Capital approval has been gained and detailed plans drawn up, to establish new, Code compliant cyanide offloading and storage facilities which will include the decommissioning and removal of all old storage and offloading facilities, including flake cyanide.
- Additional interim actions to manage the cyanide risk include additional tank and facility inspections which includes thickness tests and frequent sealing of the bund area

#### **Evidence presented to Auditors**

- Photographic evidence of completion and commissioning of the new cyanide storage and off-loading facilities within secondary containment.
- Documentary evidence of pipe weld X-ray tests, tank inspections, thickness tests, external engineering inspections and other quality control inspections.
- Photographic evidence of the decommissioning and disassembly of the old flake cyanide plant



## **Corrective Action Plan - 2**

**Principle 4 – Operations:** manage cyanide process solutions and waste streams to protect human health and the environment

**Operations Practice 4.1** Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventative maintenance procedures

### **Deficiencies**

- The plant is in the process of implementing a Computerised DMS 2000, Planned Maintenance System (PMS). Although the cyanide plant maintenance and inspection schedule covering critical cyanide equipment was sighted, there were insufficient records to evaluate the effective implementation and sustainability of the PMS.

### **Corrective Actions**

- Six months of PMS records and associated documentation to illustrate the sustainability and operational implementation of the PMS.

### **Evidence presented to Auditors**

- Printouts of cyanide equipment maintenance histories including planned maintenance inspections and breakdowns for at least 8 months on tanks, pipes, and pumps.
- Examples of completed jobcards covering breakdowns, repairs and inspections

## **Corrective Action Plan - 3**

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

**Operations 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 an 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



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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 within the next eight months.

### **Evidence presented to Auditors**

- The Evander Kinross Plant Training matrix and training schedule including all cyanide awareness training and task training requirements and individuals' completion dates
- Attendance lists for training sessions on revised procedures, emergency procedures, and emergency drills
- Competency assessments on a sample of individuals performing cyanide tasks, procedures and emergency procedures.

### **Conclusion**

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



**Arend Hoogervorst**  
**Lead Auditor**

**Date: 28<sup>th</sup> February 2011**

