



December 2011

INTERNATIONAL CYANIDE MANAGEMENT CODE RECERTIFICATION AUDIT

Kalgoorlie Consolidated Gold Mine Recertification Audit Summary Audit Report

Submitted to:

International Cyanide Management Institute
(ICMI)
888 16th Street, NW - Suite 303 Washington,
DC 20006
UNITED STATES OF AMERICA

Kalgoorlie Consolidated Gold Mines Pty Ltd
Black Street
Kalgoorlie WA 6433
AUSTRALIA

REPORT

Report Number. 117643018-003-R-Rev0

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SUMMARY AUDIT REPORT FOR OPERATIONAL GOLD MINES

Name of Mine: Kalgoorlie Consolidated Gold Mines (Fimiston and Gidji).

Name of Mine Owner: Kalgoorlie Consolidated Gold Mines Pty Ltd, a joint venture project owned by Newmont Australia Limited (50.00%) and Barrick Gold Corporation (50%).

Name of Mine Operator: Kalgoorlie Consolidated Gold Mines Pty Ltd.

Name of Responsible Manager: Brett McFadgen, Processing Manager

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LOCATION DETAIL AND DESCRIPTION OF OPERATION:

KCGM manages the Fimiston Open Pit (the Super Pit), Mt Charlotte Underground Mine, Fimiston Mill and Gidji Roaster (Gidji) for Newmont Australia Limited and Barrick Gold of Australia Ltd, who both own a 50% stake in KCGM.

The Fimiston Plant was commissioned mid way through 1989 and processes ore from primarily two different sources, sulfide refractory ore from the Super Pit, and underground sulfide ore from the Mt Charlotte underground mine. The Mt Charlotte Ore is free-milling but is processed with the sulfide refractory ore.

The sulfide refractory ore contains gold that cannot be readily recovered by leach/adsorption. The slurry produced by milling this ore is first treated by flotation to produce a sulfide concentrate, which is then roasted to convert the sulfide to oxide and expose the gold so that leaching can occur.


After the slurry is treated in the flotation circuits at the Fimiston Plant to produce a sulfide concentrate, the concentrate is washed and dewatered before being trucked to Gidji for roasting. At Gidji, it is repulped by mixing it with water and then fed to the roasters.

During roasting the concentrate, slurry is mixed with air and subjected to very high temperatures. This converts the sulfides to produce the roaster product known as calcine, from which, the gold can be leached in the leach/adsorption circuit. The loaded carbon from this circuit is then transported to the Fimiston Plant elution circuit where it is stripped and the gold is recovered by electrowinning.

The budgeted Fimiston Plant throughput rate is 12 Mtpa of ore; of this, the Fimiston grinding circuit is budgeted to process 10 Mtpa, and the Mt Charlotte grinding circuit 2.0 Mtpa. The total budgeted gold production at the Fimiston Plant is 650 000 ounces per annum.

Cyanide is utilised at both the Fimiston and Gidji sites.

Kalgoorlie Consolidated Gold Mines
Name of Facility


Signature of Lead Auditor

5 December 2011
Date



**SUMMARY AUDIT REPORT
AUDITORS FINDINGS**

The Kalgoorlie Consolidated Gold Mines is:

in full compliance with

in substantial compliance with

not in compliance with

**The International
Cyanide Management
Code**

No significant cyanide incidents or cyanide exposures and releases were noted as occurring during the audit period.

Audit Company: Golder Associates
Audit Team Leader: Mike Woods, RABQSA (113792)
Email: mwoods@golder.com.au

Name and Signatures of Other Auditors:

Name	Position	Signature	Date
Mike Woods	Lead Auditor		5 December 2011
Tom Carmichael	Technical Specialist		5 December 2011
Russell Beazley	Auditor		5 December 2011
Peter Willcocks	Independent Auditor		5 December 2011

Mr Peter Willcocks was used for independent review of aspects of the KCGM's cyanide management system that Golder was primarily responsible for designing or developing. Standards of Practice (SOPs) reviewed by Mr Willcocks include; SOP 3.1 Design and Construct; 3.2 Operate Unloading/Storage/Mixing; 4.7 Spill Containment (Tanks/Pipelines); 4.8 QA/QC Facility Construction; 4.1 Operations/Systems; and 4.2 Operations/Systems. Mr Willcocks is not affiliated with Golder.

Dates of Audit:

The Certification Audit was undertaken over four days (12 person-days) between 13 and 16 June 2011.

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

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KCGM- ICMC RECERTIFICATION AUDIT SUMMARY AUDIT REPORT

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code's *Gold Mining Operations Verification Protocol* and using standard and accepted practices for health, safety and environmental audits.

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Limitations



PRINCIPLE 1 – PRODUCTION

Encourage Responsible Cyanide Manufacturing by Purchasing from Manufacturers that Operate in a Safe and Environmentally Protective Manner

Standard of Practice 1.1: Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 1.1

not in compliance with


Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practise 1.1 requiring cyanide to be purchased from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.

Both KCGM's Fimiston and Gidji operations purchase all their cyanide requirements from Australian Gold Reagents Pty Ltd (AGR) under a Sodium Cyanide Supply Agreement (Agreement). The Agreement requires cyanide to be produced at a facility that has been certified as complying with the Code.

AGR was initially certified as fully compliant as a cyanide producer on 9 October 2007. AGR maintained production certification throughout the supply period and were certified again on 24 November 2010.

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PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment During Cyanide Transport

Standard of Practice 2.1: Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 2.1

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 2.1, requiring that the operation establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

KCGM purchases its cyanide reagent from AGR under an Agreement. The Agreement establishes clear lines of responsibility for safety, security, release prevention, training and emergency response.

The Agreement extends to any subcontractors used by AGR, the cyanide transporter.

AGR was certified as a transporter under the Code on 26 September 2006 following ICMI's acceptance of a report dated 8 September 2006 verifying compliance with a Corrective Action Plan dated 30 June 2006. AGR maintained transport certification throughout the supply period and was recertified on 19 April 2010.

Standard of Practice 2.2: Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 2.2


not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 2.2, requiring that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

KCGM sources all its cyanide requirements from AGR. AGR, the cyanide transporter, was certified under the Code on 26 September 2006 following ICMI's acceptance of a report dated 8 September 2006 verifying compliance with a Corrective Action Plan dated 30 June 2006. AGR maintained certification throughout the supply period and was recertified on 19 April 2010.

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PRINCIPLE 3 – HANDLING AND STORAGE

Design and Construct Unloading, Storage and Mixing Facilities Consistent with Sound, Accepted Engineering Practices, Quality Control/Quality Assurance Procedures, Spill Prevention and Spill Containment Measures

Standard of Practice 3.1: Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 3.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 3.1, requiring that cyanide handling and storage facilities are designed and constructed consistent with sound, accepted engineering practices, quality assurance/quality quality (QA/QC) procedures, spill prevention and spill containment measures.

Facilities for unloading and storing liquid cyanide at both Fimiston and Gidji have been designed and constructed with input from the cyanide producer, adopting accepted engineering practices and satisfying applicable regulatory requirements. At both locations, the unloading and storage areas are located at significant distances away from surface waters and from residential areas. Reagent cyanide is unloaded on concrete surfaces that are configured to drain any spillage into secondary containments from which it can be recovered. The four horizontal bullet storage tanks at Gidji are installed within a concrete bund whilst the vertical tank at Fimiston is founded on a concrete ring beam, which has a double layer of high density polyethylene (HDPE) spanning the bund floor and the footprint of the tank within the concrete bund wall.

Both the Fimiston and Gidji storage areas are in dedicated, locked compounds located within the respective operational areas, which are in turn secured from public access. The cyanide storage areas are separate from incompatible dangerous goods including oxidisers and explosives. The vents on the storage tanks and unloading pipework are configured to ensure that hydrogen cyanide gas (HCN) released from the facilities is readily dispersed in the open atmosphere away from locations where workers may be present.

Standard of Practice 3.2: Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 3.2

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 3.2 requiring that cyanide handling and storage facilities are operated using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

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All reagent strength cyanide for Fimiston and Gidji is delivered in liquid form within isotainers, stored in two separate facilities and dosed directly into the circuit via the ring mains. The Fimiston and Gidji facilities are configured differently due to having been built at different locations and at different times. Appropriate standard operating procedures, operator training and practices have been developed and implemented to manage cyanide unloading and clean-up activities effectively and safely at each facility.

An observer is in attendance during unloading at both sites and the procedures provide for correct personal protective equipment (PPE) to be used by the driver during unloading.

Standard operating procedures and operator training are effective in managing unloading practices. The Supply Agreement contributes effectively to preventive maintenance practices, with a representative of AGR undertaking periodic inspections of the facilities and reporting to KCGM in writing on opportunities for improvement.

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PRINCIPLE 4 – OPERATIONS

Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

Standard of Practice 4.1: Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 4.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.1, requiring that the operation implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

KCGM operates several database systems to manage access to procedures, training materials, checksheets, logsheets for processing (i.e. BabelFish), maintenance (i.e. EMPAC), and health, safety and environment (HSE) management (i.e. SECRIIS). The systems document the operation of the mineral processing and tailings storage facilities including cyanide unloading and storage, carbon-in-leach (applicable to both Fimiston and Gidji) and the peroxide cyanide destruction facility at Fimiston 2 tails dam, for the return of decant water from the TSFs (Fimiston only). Within these information systems there are documents that cover the requirements to operate the facilities in ways that manage the risk of cyanide exposures and releases under normal and abnormal conditions. Key design assumptions and regulatory requirements are mostly documented in training materials and the importance of those points is reinforced, where appropriate, by their inclusion as inspection points on checklists.

KRMA is a system of databases that enable the workflow of procedures such as change management and corrective actions from operational inspections (MAP) to be administered. EMPAC is the system used by KCGM to schedule, document and record preventive maintenance and repair activities. These systems provide sophisticated means of tracking work done, persons involved, dates, work records and outstanding work, whether planned to routine or initiated in response to issues identified.

Although there is backup power available at Gidji, KCGM is of the view that there are no processing scenarios that will lead to cyanide releases or exposures in the event of power failure.

KCGM has developed documentation including training materials, work procedures and inspection checklists to reflect a Code-compliant definition of "Cyanide Facilities" as including equipment containing cyanide solutions stronger than 0.5 mg/L WAD cyanide and for all such equipment to be subject to planned inspections.

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Standard of Practice 4.2: Introduce management and operating systems to minimise cyanide use, thereby limiting concentrations of cyanide in mill tailings.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.2, requiring that the operation limit the use of cyanide to that optimal for economic recovery of gold so that the waste tailings material has as low a cyanide concentration as practical.

Significant investigations have been undertaken over many years to develop a body of knowledge regarding the optimal cyanide addition rate, to determine the appropriate assays, type and configuration of analytical equipment and points of addition for cyanide.

Metallurgists continue to optimise cyanide addition rates at both facilities, with analytical results being maintained and interpreted using spreadsheets. Although the required cyanide concentration could be ordered to be changed at any time, formal weekly and monthly reports are prepared to keep gold extraction performance and cyanide use in focus. This is especially important at Fimiston, which is upstream in the processing flow and therefore is the first point to be affected by any changes in ore characteristics. The basis of cyanide addition is less variable at Gidji because the ore processed there has already been processed at Fimiston to separate a stream of material appropriate to the roaster. The upstream processing produces a stream with less short term variability in chemical characteristics.

There is a total of five leaching trains at KCGM, each with their own strategy for cyanide concentration control. Cyanide concentration is measured using on-line analysers with manual titration as backup. The addition rate is regulated either by automatic or in the case of the back-up by manual positioning of actuated control valves.

Standard of Practice 4.3: Implement a comprehensive water management program to protect against unintentional releases.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:


KCGM is in FULL COMPLIANCE with Standard of Practice 4.3, requiring the operation to implement a comprehensive water management programme to protect against unintentional releases.

KCGM has developed a comprehensive, probabilistic water balance for its Fimiston and Gidji operations.

The water balance considers the following in a reasonable manner and as appropriate for the facilities and environment:

- Actual tailings deposition rates – entered into the model on a regular basis and forecast tonnages adjusted in consideration of these. Inputs include plant throughputs, percentage tailings application to the two cells and data on the densities of the material streams involved.

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- Design storm duration and return intervals – The model assumes a 1:100 yr 72 h event with a total precipitation of 173 mm in accordance with ANCOLD and DoCEP guidelines.
- Precipitation and evaporation data – the water balance uses data from the Kalgoorlie-Boulder Meteorological Office, which is in close proximity to KCGM and has been operational for seventy years.
- Surface run-on – the TSF facilities at Fimiston and Gidji are paddock style water management facilities with no up-gradient catchment areas.
- Freezing and thawing – these conditions have not been relevant to the Fimiston and Gidji operations since records were first collected.
- Solution losses in addition to evaporation – the capacity of the decant system, drainage and recycling systems, and seepage to the subsurface have been taken into account in the model design.
- Pump failures – the model has capacity to examine the effect of pump failure with functionality to deactivate selected pumps for a specified duration.
- Surface water discharges – there are no surface water discharges at the Fimiston and Gidji operations.
- Phreatic surface – seepage and infiltration rates are used in the model to determine the moisture content and approximate position of the phreatic surface within the tailings cells.

KCGM's operating procedures incorporates inspection and monitoring activities to implement the water balance and prevent overtopping of ponds and impoundments and unplanned discharge of cyanide solutions to the environment. This includes three hourly (Fimiston) and four hourly (Gidji) TSF inspections of freeboards and pipe, pump and embankment integrity, fortnightly freeboard surveys and annual TSF audits. In addition to the field inspections, an electronic control system is used to continuously monitor for leak detection on tailings delivery and return water lines as well as level of decant, process and storm water ponds.

Ponds and impoundments are designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations. The TSFs are designed in accordance with the ANCOLD Inc Guidelines and with the DoCEP (now under the auspice of Department of Commerce) Guideline on the Safe Design and Operating Standards for Tailings Storage. Audits of the TSFs are conducted by external professionals on an annual basis. Part of these audits includes and assessment of freeboard. The audit reports for both facilities for 2009 and 2010 noted that all freeboard requirements had been met.

KCGM compares precipitation results to design assumptions and revises operating practices as necessary. Precipitation data is obtained from the nearby District Meteorological Office. The operation undertakes predictive runs with this data every three months, monitoring data updates every six months and calibration runs every two years.

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Standard of Practice 4.4: Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.4

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.4, requiring the operation implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

KCGM has implemented measures to restrict access by wildlife and livestock to all open waters where WAD cyanide exceeds 50 mg/L WAD cyanide. No open waters regularly exceed 50 mg/L WAD cyanide at the Fimiston operation. There have been five exceedances at Fimiston since the certification audit. On each occasion, the incidents were investigated, wildlife monitoring and sampling frequencies increased for one week after and appropriate process controls put in place to prevent reoccurrence.

The TSF and toe drain at the Gidji operation have solution that exceeds 50 mg/L WAD cyanide. As such, these facilities have been netted for the duration of the recertification period. There have been two incidents of exceedances at the remaining open water bodies at Gidji since the certification audit. One incident (December 2008) resulted from a pump failure, resulting in tailings overflowing into un-netted ponds. A resultant investigation found the cause to be changes to the design and management of the TSF throughout its life without going through the appropriate change management procedures and the fact that the TSF operations manual had not been updated for five years. To rectify this, KCGM has rolled out a new change management procedure. The auditor was not provided evidence of updated operations manuals. Despite this, no such pump failures and resultant WAD cyanide exceedances have occurred since that incident in late 2008.

In June 2010, the operation of the ultra fine gravity circuit lead to the loss of a dilution factor used to keep WAD cyanide in the Saline Dam below 50 mg/L and the cyanide level in the Solar Pond exceeded the 50 mg/L level for an open water body. Levels in this water body have remained above the 50 mg/L limit consistently since 15 June 2010. When the results of regular sampling identified this as an issue, KCGM management made a decision to net the dam. Due to the lack of availability of the netting contractor, the netting was not installed until 22 January 2011. In the interim, the Saline Dam was included in the three hourly TSF inspections, which includes observations for wildlife deaths. It should be noted that no wildlife deaths have occurred at Fimiston or Gidji as a result of the exceedances.


The Kaltails TSF is yet to be commissioned and an assessment of this facility against Standard of Practice 4.4 will occur during the next recertification audit.

KCGM can demonstrate that the cyanide concentration in open water in TSFs and solution ponds does not exceed 50 mg/L WAD cyanide. With the exception of the exceedances mentioned above, all other open water bodies at KCGM have WAD cyanide solutions below 50 mg/L.

KCGM has demonstrated that maintaining a WAD cyanide concentration of 50 mg/L or less in open water is effective in preventing significant wildlife mortality. Regular wildlife monitoring is undertaken at their TSF facilities and the data interrogated by the auditor indicated that no cyanide related wildlife deaths have occurred during the recertification period.

The operation does not use a heap leach process.

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Standard of Practice 4.5: Implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.5

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.5, requiring the operation implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

KCGM does not have a direct discharge to surface water.

The nearest surface water body to Fimiston is Hannans Lake, an ephemeral salt lake located approximately six kilometres to the south. The nearest surface water body to Gidji is King of the West Lake, an ephemeral salt lake located approximately 10 km to the north-east.

Groundwater monitoring does not indicate that either operation is indirectly discharging to these surface water bodies.

Standard of Practice 4.6: Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.6

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:


KCGM is in FULL COMPLIANCE with Standard of Practice 4.6, requiring the operation implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater

The operation implements specific water management measures to manage seepage to protect the beneficial use(s) of groundwater beneath and/or immediately downgradient of the operation. All TSFs operated by KCGM are engineer designed, with seepage trenches and abstraction bores in place to prevent any contaminants from moving downgradient via the groundwater.

WAD cyanide concentrations in groundwater at compliance point below or down gradient of the Fimiston operation are at or below levels that are protective of the identified beneficial of groundwater. The groundwater licence for Fimiston has set a groundwater quality target of 0.5 mg/L WAD cyanide. Monitoring data suggests that WAD cyanide has not exceeded 0.35 mg/L.

The Department of Environment and Conservation (DEC) licence for Gidji requires monitoring for WAD cyanide at various monitoring and production bores around and down gradient of the TSF on an annual basis. However, these bores have not been designated as compliance bores and no numerical standard has been set by the regulator in the licence. The DEC issues environmental licences to mining operations in Western Australia that specify water monitoring, monitoring methodologies, water quality limits and associated compliance points. Gold mining operations within Western Australia are assigned a groundwater WAD Cyanide limit of 0.5 mg/L on their environmental licences on a case by case basis. In the case of Gidji, the DEC has chosen not to assign a groundwater WAD cyanide limit and associated compliance points for such a limit. The Government acknowledges that the hyper-saline nature of the groundwater overrides any

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normally accepted range of water quality standards for protection of sensitive environmental receptors or uses of the water. Due to the saline nature of the water, the regulators have established mining and minerals processing as the beneficial use for groundwater in the Goldfields region. Since there is a beneficial use, but no point of compliance or numerical standard set by the regulator, this question does not apply to Gidji.

The operation does not use tailings as underground backfill.

Standard of Practice 4.7: Provide spill prevention or containment measures for process tanks and pipelines.

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.7**

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.7 requiring that the operation provides spill prevention or containment measures for process tanks and pipelines.

KCGM's Fimiston and Gidji facilities are located in an arid area with high annual evaporation rates. KCGM does not have a direct discharge to surface waters and the vulnerability of groundwater beneficial uses to cyanide releases from KCGM sites has been assessed as very low due to its high salinity, its depth below ground and the low permeability of the natural strata beneath the facilities.


KCGM's Fimiston and Gidji processing facilities are largely fabricated from materials recognised as compatible with cyanide concentrations and high pH such as stainless steel, mild steel and HDPE. However there are parts of the process where more specialised materials are used to ensure effective containment, taking account of the salinity of process water and the abrasive conditions in agitated process tanks. The company has an extensive body of knowledge on the use of ultra high build epoxies, elastomeric polyurethanes and glass flake reinforced epoxy resins. Inspection of tanks handling cyanide solutions on a twelve to eighteen month cycle is a key element of KCGM's spill prevention strategy that has been in place for some considerable time. Processing tanks have been installed in secondary containments which have facilities to pump spilled materials back into the process.

All spillage and storm water run-off from the Fimiston and Gidji plants that is not captured within dedicated secondary containment areas is collected in stormwater containment areas that have capacity to contain a once-in twenty five year storm event. The storm event adopted is based on a regulatory standard that applies in Nevada, USA where one of KCGM's joint venture partners operates.

Only one cyanide solution tank is sited within an unlined secondary containment. KCGM has satisfied itself that the earthen bund system serving this low strength cyanide solution tank has the capacity to contain a Code-compliant volume; it has procedures to treat such a spill as an emergency and to deal effectively with the clean-up of contaminated soil.

Cyanide ring mains are routed above ground over sealed areas and flanged joints are fitted with flange covers to limit the consequences of any leaks. There are however sections of underground pipework carrying low strength cyanide solutions. KCGM has undertaken extensive test work to satisfy itself that any slow leaks from these sections of pipeline will manifest themselves at the ground surface relatively quickly and there are regular patrols of these sections of buried pipework to ensure that the signs of leakage will be noted promptly. Differential flow measurement systems will detect major leaks from these tailings and return water lines.

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Many tanks containing cyanide solutions at Gidji and Fimiston are placed on ring beams. KCGM's own engineering team has developed and implemented an innovative system for the detection of leaks from the bottom of ring beam tanks.

Standard of Practice 4.8: Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.8

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 4.8 requiring that operations implement quality control and quality assurance (QA/QC) procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

The initial certification audit documented that quality control and quality assurance programs were implemented for cyanide facilities in existence at that time. These facilities included cyanide storage facilities, pipelines, conveyance ditches process ponds, and heap leach facilities. KCGM has continued these quality control and quality assurance programs for expansions and new cyanide facilities since the initial certification.

In the case of TSFs, the preparation of annual operational audits of the TSFs satisfies the state legislative requirement.

Standard of Practice 4.9: Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.9

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:


KCGM is in FULL COMPLIANCE with Standard of Practice 4.9 requiring that operations implement monitoring programmes to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

KCGM has developed written standard procedures for surface and groundwater monitoring, spigot and decant sampling and wildlife observations.

Appropriately qualified personnel have developed sampling and analytical protocols. An environmental consulting firm has developed the water quality monitoring procedures. These are reviewed annually by the KCGM Environmental Officer, who has a Bachelor of Science with Honours in Environmental Science and three years site experience.

The KCGM wildlife monitoring procedures were developed by KCGM using information provided by qualified ornithologist David Donato from Donato Environmental Services (DES). DES specialises in wildlife monitoring with particular reference to cyanide Code compliance.

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The procedures specify how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analysed.

Sampling conditions (e.g. weather, livestock/wildlife activity, anthropogenic influences, etc), and procedures are documented in writing. A review of the field sheets indicated that sampling conditions are being recorded for water/tailings sampling and wildlife observations.


KCGM monitors for cyanide in process water discharges to groundwater down gradient of the site. The Fimiston and Gidji operations do not have a direct or indirect discharge to surface waters. A review of the environmental monitoring database indicated that groundwater monitoring has occurred between 2008 and 2011 as per the operation's procedures.

KCGM inspects and records wildlife mortalities related to contact with and ingestion of cyanide solutions. KCGM has engaged a contractor to undertake weekly wildlife monitoring at the Fimiston TSFs and associated open water bodies in accordance with a detailed procedure prepared by David Donato.

All open water bodies at Gidji, consistently recording WAD cyanide levels over 50 mg/L, are covered with netting to restrict fauna access. The remaining water bodies are located within the vicinity of the TSF and are inspected by the Gidji process operators as part of the four hourly TSF inspections.

KCGM monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner. Water quality sampling ranges between daily and annually, whilst wildlife observations are weekly at Fimiston and four hourly at Gidji.

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PRINCIPLE 5 – DECOMMISSIONING

Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

Standard of Practice 5.1: Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.1

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 5. 1 requiring that operations plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

KCGM has a decommissioning plan for the Fimiston Mill and Gidji Roaster (including associated pipes and pumps from the Fimiston Mill, Gidji Roaster and Kaltails TSFs), developed by Golder. The content of this plan and its compliance with this Standard of Practice was reviewed by a third party auditor to remove any conflict of interest.

The decommissioning plan contains a schedule, with preparatory work commencing six months prior to the physical commencement of decommissioning. The schedule then divides the various components of cyanide facility decommissioning over a twelve month period.

The operation has established a system to review its decommissioning procedures for cyanide facilities during the life of operations and revise them as needed. The plan was last updated in Mary 2011.

Standard of Practice 5.2: Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.2

not in compliance with


Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 5.2 requiring that the operation establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

The operation has developed a cost estimate to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its site decommissioning plan. The decommissioning costs, prepared by Golder, at KCGM, are split between the Fimiston and Gidji facilities and include cyanide facility direct costs (e.g. task development, cleaning and contaminated sites) and safety costs (e.g. revise emergency response plans, training and risk assessments).

The operation reviews and updates the cost estimate at least every five years and when revisions to the plan are made that effect cyanide-related decommissioning activities. Department of Industry and Resources (DoIR) has established an Unconditional Performance Bond (UPB) system under Section 84 of the Mining Act.

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The operation has established a financial mechanism, approved by the applicable jurisdiction, to cover part of the estimated costs for cyanide-related decommissioning activities, as identified in its decommissioning plan.

Fimiston's cyanide facilities are spread across 12 tenements. The combined UPB total exceeds the estimated costs to decommission the Fimiston cyanide facilities.

Gidji's cyanide facilities are currently spread across six tenements. The combined UPB total is not sufficient to cover the estimated costs to decommission the Gidji cyanide facilities. As an alternative to this, the joint venture owners (i.e. Barrick and Newmont) have engaged independent certified public accountants to assist in obtaining a corporate financial guarantee for all cyanide decommissioning activities. The resultant reports contain several summary statements confirming Barrick's and Newmont's financial strength and experience in decommissioning, which were interpreted to mean that Barrick and Newmont have sufficient financial strength to meet its cyanide decommissioning costs.

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PRINCIPLE 6 – WORKER SAFETY

Protect Workers’ Health and Safety from Exposure to Cyanide

Standard of Practice 6.1: Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 6.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 6.1 requiring an operation to identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

KCGM has developed a suite of procedures for cyanide related tasks. The procedures presented are comprehensive providing detailed instruction to complete the tasks safely. They clearly identify the hazards associated with the task and utilise the hierarchy of controls to ensure personal safety.

In addition to this, any service task that involves the processing plant is conducted under the equipment or task Hand Over Permit (HOP) system. A Job Safety Analysis has to be conducted prior to a HOP being issued. There are also further requirements for confined space or hot works with a formalised permit to work and isolation system implemented.

The procedures do include the requirement for PPE and pre-work inspections where relevant. The level of PPE is always highlighted where necessary in all procedures with a higher level of PPE where the risk is higher. Regular monthly and daily inspections are highlighted in the procedures and are being conducted.

There is a formal change management process that uses the online KRMA Change Management System (CMS) database where anyone can initiate a change to the process, equipment or system. The CMS requires assessment by designated departments including safety and environment. There is also a formalised system for the development and changes to procedure that involves the input of crew members.

To compliment the KRMA CMS, the operation has a comprehensive review process to evaluate changes or impacts from engineering projects. A new capital project is subject to a stage gate process where safety and environmental issues are considered at each development stage prior to the operation committing to the capital project.

Standard of Practice 6.2: Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 6.2

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 6.2 requiring KCGM to operate and monitor cyanide facilities to protect worker health and safety, and periodically evaluates the effectiveness of health and safety measures.

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KCGM has determined the appropriate pH for limiting the evolution of HCN gas during mixing and production activities. Personal monitors are compulsory in the areas where HCN gas may be emitted. If and when the level reaches or exceeds 10 ppm personnel must leave the area and only the authorised operator wearing a full-face respirator and HCN monitor is permitted to access the area to investigate the source of the HCN gas. The personal monitors are regularly calibrated according to the manufacturer's requirements.

Warning signs are placed at the access areas to warn personnel when cyanide is present. Signage also indicates the PPE requirements. There are no smoking, no eating and no drinking rules for areas where cyanide may be present. The HOP system ensures no open flames when there is a potential for cyanide emission.

There are showers, low pressure eye wash stations and dry-powder fire extinguishers located strategically across the processing areas, and they are maintained and inspected regularly.

The unloading, storage, mixing, and process tanks and piping containing cyanide are identified to alert workers of their content and the direction of the flow of cyanide in pipes. In addition to this the liquid cyanide delivered to site has dye mixed in to further assist with identification of leaks within the processing areas for both Fimiston and Gidji.

Material Safety Data Sheets (MSDS), first aid and other informational material on cyanide are available in areas where cyanide is managed.

Procedures are in place to investigate cyanide incidents and to implement remedial actions to procedures or practices where required.

Standard of Practice 6.3: Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

in full compliance with

The operation is in substantial compliance with **Standard of Practice 6.3**

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 6.3 requiring an operation develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

KCGM has developed and implemented emergency response plans and procedures to respond to worker exposure to cyanide. The site has its own on-site capability including the Emergency Response Team and a structured crisis management system.

The operation has water, oxygen, resuscitator, antidote kits and radios, telephones, alarm system to communicate an emergency situation at the cyanide unloading, storage and mixing locations across the process area. The first aid equipment is regularly inspected to ensure it is effective when required. The site also has a fully equipped ambulance.

The operation has liaised directly with Kalgoorlie Hospital which has the capabilities including the antidote kits for treatment of cyanide casualties. They have had visitations by Hospital staff for them to gain an understanding of the process and medical emergency requirements (including cyanide emergencies).

Mock emergency drills have been conducted and KCGM have a close working relationship and Mutual Aid Agreement with the Fire and Emergency Services (FESA) who are the local emergency response agency. KCGM have conducted emergency response exercises for worker exposure and debriefs were conducted to improve response planning.

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PRINCIPLE 7 – EMERGENCY RESPONSE

Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities

Standard of Practice 7.1: Prepare detailed emergency response plans for potential cyanide releases.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 7.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 7.1 requiring an operation prepare detailed emergency response plans for potential cyanide releases.

The Cyanide Emergency Procedure provides pre-incident plans covering anticipated emergency situations involving cyanide for the site. The emergency response training materials provide for the establishment of exclusion zones based on the nature of the incident.

The Gidji Emergency Procedures and Fimiston Mill Emergency Procedures describe the actions taken and the responsibilities in the initial response and assessment of an incident and include specific instructions for cyanide related incidents.

The operation has undertaken a modelling exercise to determine the likely impact and spread of HCN gas incident at its Fimiston operation. The modelling concluded that in the event of a worst case credible scenario, HCN emission would not require off-site evacuation.

The KCGM Crisis Recovery Plan provides direction and responsibilities for contacting potentially affected communities should it be required.

The Cyanide Exposure Procedure details the actions to be taken when a person is suspected of cyanide poisoning. This procedure includes instructions for the use of antidote kits and first aid equipment.

Standard of Practice 7.2: Involve site personnel and stakeholders in the planning process.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 7.2

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 7.2, requiring an operation involve site personnel and stakeholders in the planning process.

There is a formal, internal review of all procedures by site personnel, including the Emergency Management Plan. The emergency response plans and procedures have involved site personnel and external stakeholders in their initial development, and KCGM maintains a close relationship with the FESA.

The operation has involved the local emergency response group (LEMAC), has a mutual aid agreement with the FESA and has adopted some of FESA's HAZMAT response procedures.

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KCGM has liaised directly with the local hospital and have brought them to site to view the issues directly. KCGM has maintained contact with Kalgoorlie Regional Hospital and has reached agreement on the storage of CYANOKITS and pre-hospital treatment of persons exposed to cyanide

Potentially affected communities have been consulted through the Community Reference Group (CRG) and through LEMAC during the initial development of response procedures. The operation also conducted HCN gas emission modelling for anticipated emergency events at the Fimiston site that concluded that emission would not require off-site evacuation.

The operation does engage in consultation or communication with stakeholders to keep the Emergency Response Plan current through joint drills, debriefs and remedial actions.

Standard of Practice 7.3: Designate appropriate personnel and commit necessary equipment and resources for emergency response.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 7.3 requiring an operation designate appropriate personnel, and commit necessary equipment and resources for emergency response.

The elements of the emergency response plans and procedures do:

a) Designate primary and alternate emergency response coordinators who have explicit authority to commit the resources necessary to implement the Plan.

The Cyanide Emergency Response Procedure, Crisis Management Plan designates the Team Leader and Deputy. All other roles are designated and have deputies.

b) Identify ERTs.

The ERT is the combat team made up of trained volunteers from the employees at the mine that receive emergency response training including HAZMAT response. FESA can also provide emergency response personnel.

c) Require appropriate training for emergency responders.

Specialised training is given to those designated as Emergency Response Coordinators and members of the ERT. KCGM has adopted some of FESA's standard operating procedures to ensure consistency in response actions should the mutual aid agreement be enacted.


d) Include call-out procedures and 24-hour contact information for the coordinators and response team members.

The Cyanide Emergency Response, the Crisis Response Plan, Fimiston and Gidji Emergency Procedures designate the roles and responsibilities, contact directories, contact list for people on-site and Role Sheets for who the responders are on the day.

e) Specify the duties and responsibilities of the coordinators and team members?

The roles and responsibilities of the various emergency responders are defined in the Cyanide Emergency Procedures and Crisis Management Plan.

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f) List emergency response equipment, including personal protection gear, available along transportation routes and/or on-site.

There is a list of emergency response equipment in Section 3 of the Cyanide Emergency Procedure, which is monitored by the Emergency Response Coordinator.

g) Include procedures to inspect emergency response equipment to ensure its availability.

The operation regularly inspects emergency response equipment on a monthly basis and quarterly basis using formal checklists. The uses tamper tags to enable easy identification of equipment that has been used or access that needs to be serviced, replenished or replaced.

h) Describe the role of outside responders, medical facilities and communities in the emergency response procedures.

The operation has a mutual aid agreement with FESA for response to cyanide emergencies and arrangements with the Kalgoorlie Regional Hospital for treating any cyanide cases.

The Operation has a full time Emergency Response Coordinator and an on-site volunteer emergency response team that has been trained in HAZMAT response and cyanide awareness. KCGM has a mutual aid agreement with the FESA and has adopted FESA procedures for HAZMAT response to ensure consistency in approach.

KCGM has confirmed that outside entities included in the Emergency Response Plan are aware of their involvement and are included as necessary in mock drills or implementation exercises. FESA has been involved in joint exercises during the initial development of cyanide response plans and KCGM has maintained contact with Kalgoorlie Regional Hospital with agreement reached on pre-hospital treatment and the administration of cyanide antidotes.

Standard of Practice 7.4: Develop procedures for internal and external emergency notification and reporting.

in full compliance with

The operation is in substantial compliance with

Standard of Practice 7.4

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:


KCGM is in FULL COMPLIANCE with Standard of Practice 7.4 requiring the development of procedures for internal and external emergency notification and reporting.

The Fimiston Mill and Gidji Emergency Management Procedures provide duty cards that detail the actions, contact information and direction for contacting management and external responders during an emergency.

These cards require the individuals to contact FESA and Kalgoorlie Regional Hospital. The KCGM Emergency Response Pre-Determined Plan documents the management and regulatory contacts including reporting timeframe to be made in the event of an emergency.

The KCGM Emergency Crisis Recovery Plan includes procedures and contact information for notifying potentially affected communities of a cyanide-related incident and any necessary response measures, and for communication with the media.

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Standard of Practice 7.5: Incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.5

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 7.5, requiring an operation develop procedures for internal and external emergency notification and reporting.

The Cyanide Emergency Procedure and associated procedures describe specific remediation measures as appropriate for likely cyanide release scenarios, such as:

- recovery or neutralisation of solutions or solids
- decontamination of soils or other contaminated media
- management and/or disposal of spill clean-up debris
- provision of an alternate drinking water supply.

Section 5.3 of the cyanide response procedure explicitly prohibits the use of chemicals, such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat cyanide that has been released into surface water.

Section 6.0 of the Cyanide Emergency Procedure addresses the potential need for environmental monitoring to identify the extent and effects of a cyanide release, and includes sampling methods, parameters and, where practical, possible sampling locations.

Standard of Practice 7.6: Periodically evaluate response procedures and capabilities and revise them as needed.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.6

not in compliance with


Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 7.6 requiring an operation periodically evaluate response procedures and capabilities, and revise them as needed.

The operation does review and evaluate the cyanide-related elements of its Emergency Response Plan for adequacy on a regular basis. The Cyanide Exposure Procedure was developed in 2008 and updated in 2008, 2010 and 2011.

Emergency response exercises have been conducted and cyanide-specific drills have been conducted in 2009, 2010 and 2011 that relate to procedures for worker exposure response and environmental spill response.

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There are provisions in place to evaluate and revise the Emergency Response Plan after any cyanide related emergency requiring its implementation. MAP reports for emergency drills have actions attached that demonstrate the operation evaluates and revises emergency response processes.

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PRINCIPLE 8 – TRAINING

Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner

Standard of Practice 8.1: Train workers to understand the hazards associated with cyanide use.

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 8.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 8.1 requiring an operation train workers to understand the hazards associated with cyanide use.

The operation does train all personnel who may encounter cyanide in cyanide hazard recognition including contractors, maintenance personnel and emergency responders. Personnel who may encounter cyanide complete the cyanide awareness and refresher training annually. The operation has linked its training database with the site access control system that must be used to access the site. This highlights when refresher training is due and prompts the individual to enrol in the training course.

The operation has also a formalised competency-based training framework for processing personnel that includes training on tasks involving cyanide. The training coordinators monitor and track completion of the units and when supervisors consider the person competent in a task or range of tasks, formal assessment of competence is undertaken. An individual cannot operate on their own until they have been assessed as competent. Procedures involving cyanide are part of this system.

The cyanide awareness, competency training and assessment, and records of attendance and completion are maintained in the BabelFish database. The operational departments maintain paper copies of the training records and assessment sheets on individual files.

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

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 8.2

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 8.2 requiring that an operation trains appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

KCGM trains workers to perform their normal production tasks, including unloading, mixing, production and maintenance, with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases.

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Cyanide awareness training is included in the induction process for persons working in the processing areas; relevant contractors and maintenance personnel must also complete the induction and cyanide awareness training. Cyanide awareness is mandatory refresher training and the operation has linked its training database with the site access control system.

Process operators go through formal competency training which uses all the cyanide procedures where required. The training elements necessary for each job involving cyanide management are identified in training materials.

A buddy system is adopted in the training and competency training where experienced operators tutor less experienced staff until they are deemed competent through a formal assessment.

Formal assessment is provided by experienced and qualified trainers and includes written and practical assessment. The operation has a contract with a registered training organisation that provides verification and assessment of the training provided by KCGM's workplace trainers. Personal training information related to certificate courses is stored on the TUTIS online database.

In-house training records are maintained in the BabelFish database and hard copies of the assessments and field observations are retained by the Training Department.

Standard of Practice 8.3: Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 8.3 requiring an operation train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

Site cyanide response personnel, including unloading, mixing, production and maintenance workers, are trained in decontamination and first aid procedures, and actions to take in the event of a cyanide emergency.


The cyanide awareness course that is completed at induction and annually thereafter provides instruction on decontamination and first aid response to cyanide incidents. The induction training and site orientation includes the use of emergency showers and eyewash stations and the measures to be taken should decontamination be required.

Attendance records for cyanide awareness training are maintained in hard copy by the processing training coordinator. The BabelFish training database is used to store electronic records. The training records detail the course delivered, the presenter, the date and the names of those attending.

All level PO6s and higher are trained in emergency response management and assume the role of incident controller at their site with the ERT providing a combat and recovery resource.

Emergency Response Coordinators and members of the ERT are trained in the procedures included in the Emergency Response Plan regarding cyanide, including the use of necessary response equipment. KCGM has a mutual aid agreement, a Memorandum of Understanding with the FESA, which permits joint emergency training for the possible emergency scenarios which may occur at the Fimiston and Gidji sites including cyanide. Due to this close working relationship with FESA, KCGM has adopted FESA standard operating procedures for response to HAZMAT incidents for its ERT to ensure consistency.

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KCGM has also maintained its relationship with Kalgoorlie Regional Hospital and has consulted with them to confirm arrangements for treating cyanide cases.

Simulated cyanide emergency drills are periodically conducted for training purposes. KCGM has undertaken emergency drills that cover both worker exposures and environmental releases.

Debriefs are conducted following emergency drills with the actions added into the MAP record for the drill. The MAP records for the emergency drills contain recommendations in relation to improving training and instruction, and demonstrate that training needs are considered in the evaluation of the exercise.

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PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

Standard of Practice 9.1: Provide stakeholders the opportunity to communicate issues of concern.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.1

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 9.1 requiring an operation provide stakeholders the opportunity to communicate issues of concern.

KCGM does provide the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide. KCGM maintains a Community Relations Department dedicated to community relations issues for KCGM, including the Fimiston and Gidji Operations. The department has a shop front in the Town of Kalgoorlie and consists of a Community Relations Superintendent, two Community Relations Officers and a Community Relations Assistant. The shop is well frequented by, on average, 30 000 visitors per year. Visitors to the shop are able to speak to any member of the KCGM Community Relations team directly regarding any topic, including cyanide. The shop front features live pit footage, website access and screenings of the Super Pit DVD.


In addition, KCGM operate a 24-hour public inquiry line to enable members of the community to contact the company on a wide range of issues including emergencies, complaints inquiries and feedback. This facility provides important feedback on issues that need follow up and action. All calls received are recorded in the public interaction line (PIL) system and any actions are tracked through to closeout.

The KCGM CRG meets once a month with KCGM representatives to discuss operational issues and to provide feedback from the public. Their mission statement is:

“The Community Reference Group will be a link between KCGM and the community to provide information and open two way communication, to ensure all views are heard and to create an atmosphere of trust and harmony.”

KCGM also allows tours of its operations. During these tours, members of the public can ask questions about cyanide use and management at the operation.

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Standard of Practice 9.2: Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 9.2 requiring an operation initiate dialogue describing cyanide management procedures and responsively address identified concerns.

KCGM has created opportunities for the operation to interact with stakeholders and provide them with information regarding cyanide management practises and procedures.

KCGM has developed a Cyanide Code Information System that is located on the KCGM intranet site that contains all information relating to cyanide management and their obligations under the ICM Code. All internal stakeholders with access to a computer terminal can access this information. In addition, all internal stakeholders that are required to work in the processing areas at Fimiston and Gidji must undergo cyanide awareness training as part of the mill induction.

- For external stakeholders, KCGM has the following mechanisms to provide information on cyanide:
- Public newsletter (KCGM News and Views)
- Cyanide use and management information on the KCGM website
- The KCGM CRG

Participation in an after-school children’s television programme that aired a segment on cyanide use at KCGM.

Standard of Practice 9.3: Make appropriate operational and environmental information regarding cyanide available to stakeholders.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

KCGM is in FULL COMPLIANCE with Standard of Practice 9.3 requiring an operation make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation has the mechanisms to make information publicly available on cyanide release or exposure incidents, where applicable.

KCGM is required to submit an AER to the DEC and the Department of Mines and Petroleum (DMP) on an annual basis. The AER details all environmental incidents that occurred on-site during the reporting period. Cyanide releases, including tailings spills are reported in the AER and this was confirmed in a review of the document. These reports are available to the public via the KCGM website. In addition to the AER, off-site spills and wildlife deaths for all Barrick operations (including KCGM) are reported on the Company’s website (although the involvement of cyanide is not specified).

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All mining operations within Western Australia are required to report serious occurrences and mining injuries (including cyanide exposures) to DMP on designated forms. The Mining Injury Report Form requires information to be recorded concerning the nature of the injury, part of the body injured and incident details. This information is managed by the DMP in a database. Information on incidents in this database can be obtained by the public through the *Freedom of Information Act*.

In addition, the Senior Community Relations Officer stated that any incidents at KCGM, such as those listed in this question, would be communicated to the CRG and via press releases. Whilst no cyanide related incidents have occurred during the recertification period, a death unrelated to cyanide use occurred on-site in January 2009. KCGM released details to the public on the day of the incident and raised the incident at the next CRG meeting (February 2009). The auditor is confident that this mechanism would also be used for any cyanide incidents or releases.

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Report Signature Page

GOLDER ASSOCIATES PTY LTD

Handwritten signature of Mike Woods in black ink.

Mike Woods
Lead Auditor

Handwritten signature of Ed Clerk in black ink.

Ed Clerk
Associate, Principal Environmental Scientist

RB/EWC/eh

A.B.N. 64 006 107 857

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APPENDIX A

Limitations



LIMITATIONS

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