June 2015

INTERNATIONAL CYANIDE MANAGEMENT CODE RECERTIFICATION AUDIT

Kalgoorlie Consolidated Gold Mines Recertification Audit Summary Audit Report

Submitted to:

International Cyanide Management Institute (ICMI)
1400 I Street, NW
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WASHINGTON DC 20005
UNITED STATES OF AMERICA

Kalgoorlie Consolidated Gold Mines Pty Ltd
Black Street
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REPORT

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Distribution:

1 Copy – International Cyanide Management Institute
1 Copy – KCGM
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Golder Associates

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:

Kalgoorlie Consolidated Gold Mines (KCGM) manages the Fimiston Open Pit (the Super Pit), Mt Charlotte Underground Mine, Fimiston Mill and Gidji Roaster operation for Newmont Australia Limited (Newmont) and Barrick Gold of Australia Ltd (Barrick), who both own a 50% stake in KCGM. Cyanide is only utilised at the Fimiston and Gidji Roaster sites.

The Fimiston Mill comprises two parallel circuits for processing refractory sulfide ore from the Fimiston open pit and ore from the Mt Charlotte underground mine. Ore produced by KCGM is treated through the following processing circuit at Fimiston Mill:

- Primary crushing plant
- Two semi-autogenous grinding mills with pebble crushing circuit
- Three ball mills
- Flotation and three carbon-in-leach circuits.

In the flotation circuit, the gold bearing refractory sulfide is separated and referred to as concentrate. The concentrate is de-slimed. The flotation tailings are leached in two parallel cyanide carbon-in-leach adsorption circuits. Slimes are leached at the Fimiston Mill and the coarse fraction separated into two streams:

- One stream is washed, filtered and transferred to the Gidji Roaster. Once roasted, the iron oxide product is treated by a conventional carbon in pulp circuit where gold is adsorbed onto activated carbon. The loaded carbon is then transported to the Fimiston elution circuit for stripping, electrowinning and smelting.

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- The other stream is transferred to the ultra-fine grinding mill. This mill reduces the particle size of the concentrate to expose enough gold surfaces to facilitate cyanide leach recoveries. After grinding, it joins the slimes to be leached at the Fimiston Mill in one of the three cyanide carbon-in-leach adsorption circuits where the gold is extracted.

The Fimiston Mill also comprises elution, electrowinning circuits, and facilities for smelting, pouring and producing gold bullion.

Australian Gold Reagents (AGR) delivers sodium cyanide (cyanide) to KCGM's Fimiston and Gidji operations.

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AUDITORS FINDINGS

Kalgoorlie consolidated Gold Mines is:

☒ **in full compliance with**

☐ in substantial compliance with **The International Cyanide Management Code**

☐ not in compliance with

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, Exemplar Global (113792)

Email: mwoods@golder.com.au

Name and Signatures of Other Auditors:

Name	Position	Signature	Date
Mike Woods	Lead Auditor		3 June 2015
Ed Clerk	Lead Auditor and Technical Specialist		3 June 2015

Mr Phil Ashton was used as an independent auditor for Standards of Practice 4.8, 5.1 and 5.2 as Golder was involved in the construction and QA/QC of the Tailings Storage Facility at Gidji and the update of the operations Decommissioning Plan.

Dates of Audit:

The Recertification Audit was undertaken over three days between 28 and 30 October 2014.

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.

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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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 conditionally recertified with the ICMC subject to the implementation of a Corrective Action Plan on 13 March 2014. All items in the Corrective Action Plan were closed out on 19 June 2014 as reported on the ICMI website.

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 notes that AGR is responsible for the transportation of the sodium cyanide solution to each site (along AGR's West Australian Supply Chain) and subsequent unloading in accordance with the requirements of the ICMC.

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

AGR's West Australian Supply Chain was re-certified under the Code on 13 June 2013.

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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 purchases its cyanide reagent from AGR under an Agreement. The Agreement requires AGR implement and comply with the ICMI's requirements for the production and transportation of sodium cyanide, including but not limited to carrying out certification audits.

AGR's West Australian Supply Chain was re-certified under the Code on 13 June 2013. The operation has chain of custody records that conform with the elements of AGR's West Australian Supply Chain.

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.**

☒ **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 control (QA/QC) procedures, spill prevention and spill containment measures.

Facilities for unloading and storing cyanide have been designed and constructed in accordance with cyanide producers' guidelines.

AGR, the cyanide supplier, undertakes annual inspections of the KCGM facilities for unloading and storage of cyanide.

The inspections detail recommendations that are promptly addressed by KCGM. At the time of the Audit, no outstanding recommendations were evident for Fimiston or Gidji.

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Both Fimiston and Gidji unloading and storage areas for liquid and solid cyanide are located away from people and surface waters; demonstrating adequate fencing, bunding, segregation from other chemicals, explosives and food and maintain restricted access only to authorised, competent operators.

The cyanide unloading areas are designed and constructed to contain, recover or allow remediation of any leakage from the tanker truck. At both Fimiston and Gidji, the cyanide unloading areas are concrete, bunded and the fall of the surface is towards containment sumps, the contents of which are pumped to the process containment areas. The concrete pavements at both Fimiston and Gidji were observed to be in good condition at the time of the audit.

Since 2011, there have not been any changes to the methods of preventing the overfilling of cyanide storage tanks and there have been no reports of overfill events. Level sensors are installed in both sets of tanks (i.e. one tank at Fimiston and four tanks at Gidji). The distributed control system (DCS) monitors the sensors. If levels exceed pre-set limits, alarms will activate in the control room.

At both the Fimiston and Gidji sites the cyanide storage tanks are located on surfaces that can prevent seepage to the subsurface. In addition cyanide mixing is not undertaken at the sites. The 2014 AGR inspection noted that the bund liner at Fimiston was in a reasonable condition for its age but the need for its future replacement should be assessed. KCGM has since raised a work order to assess the longevity of this liner.

Secondary containments for cyanide storage tanks are constructed of materials that provide a competent barrier to leakage. Cyanide process tanks at each site are located within concrete (Gidji) and high-density polyethylene (HDPE) (Fimiston) bunded areas. Both facilities appear to provide a competent barrier to leakage.

Cyanide storage at the Fimiston and Gidji operations demonstrates:

- Storage with adequate ventilation to prevent the build-up of hydrogen cyanide gas. The liquid cyanide storage tanks at both operations are enclosed tanks. The tanks and unloading line are vented via goose neck pipes. The resulting air cavity is ventilated to atmosphere within the bunded compounds and in an elevated position to greatly reduce the risk of personnel exposure to Hydrogen cyanide (HCN) gas. The tanks at both sites are located in open areas exposed to the atmosphere to prevent localised build-up of hydrogen cyanide gas.
- Solid cyanide is not stored or used at either the Fimiston or Gidji operations.
- Liquid cyanide storage tanks at both Fimiston and Gidji are located within fenced areas with access restricted to authorised, competent personnel. The Control Room at each site monitors both storage areas via video cameras. Access to the Fimiston Plant and the Gidji Roaster is controlled via swipe card-activated turnstiles which are monitored by the Control Room Operators. Visitors are not permitted to enter the sites unless they have completed a visitor induction and are accompanied by a fully inducted person at all times.
- At both Fimiston and Gidji operations, cyanide unloading and storage facilities are separated from acids, strong oxidizers and explosives through the physical location of the facilities and use of secondary containments.

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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.

The operation is

☒ **in full compliance with**

☐ 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.

KCGM does not take possession of cyanide isotainers. All cyanide for the process plant is delivered in liquid form and dosed directly into the circuit via the ring mains.

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. KCGM has developed and implemented the following plans or procedures pertaining to the relevant ICMI category at Fimiston and Gidji to prevent exposures and releases during cyanide unloading and mixing activities:

a) Operation of all valves and couplings for unloading liquid cyanide and mixing solid and liquid cyanide.

The Agreement with AGR specifically places the responsibility for the safe unloading at the KCGM sites with the Supplier.

AGR has a Vehicle Operators Handbook for Sodium Cyanide Solution GM-09-110-02 that specifies the handling, loading and unloading procedures for vehicle operators at the Fimiston and Gidji reagent facilities.

KCGM has the following supporting procedures for cyanide unloading:

- Fimiston Operations – Cyanide Unloading Procedure
- Gidji Roaster Operations – Bulk Liquid Cyanide Unloading Procedure
- Gidji Reagent Unloading Checklist – Sodium Cyanide Solution.

Both the observer and truck driver complete an unloading checklist detailing items to be inspected and recorded before, during and after unloading.

b) Handling cyanide containers without rupturing or puncturing.

Not applicable to KCGM. Cyanide containers are not handled on site. Cyanide deliveries are via truck-mounted steel isotainers.

c) Limiting the height of stacking of cyanide containers.

Not applicable to KCGM. Cyanide containers are not handled on site. Cyanide deliveries are via truck-mounted steel isotainers.

d) Timely clean-up of any spills of cyanide during mixing

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Cyanide is delivered in liquid form and transferred directly into storage tanks. No cyanide mixing processes are conducted by KCGM.

KCGM has developed and implemented Cyanide Spill Procedures for both Fimiston and Gidji. During the audit, site personnel demonstrated an awareness of the spill response requirements.

e) *Providing for safe unloading of liquid cyanide and manual mixing of solid cyanide by requiring appropriate personal protective equipment and having a second individual observe from a safe area or remote observation by video?"*

KCGM procedures prescribe the requirements for safe unloading of liquid cyanide at the sites. Solid cyanide is not handled at the sites.

Appropriate personnel protective equipment is kept at the observation shelter at the unloading areas at both Fimiston and Gidji. The unloading events are observed by a KCGM person located at the observation shelter at each site and by the site's control rooms via CCTV.

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.**

☒ **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, check sheets, log sheets for processing, maintenance (Oracle), and health, safety and environment (HSE) management. These systems are hosted and accessible by the operations intranet system.

The systems document the operation of the mineral processing and tailings storage facilities including cyanide unloading and storage, carbon-in-leach (CIL) (applicable to both Fimiston and Gidji) and cyanide destruction facilities.

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.

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KCGM has a change management procedure that provides a common framework for the systematic and structured management of changes at KCGM. The procedure requires the assessment of the change for safety and environmental impacts of the proposed change. Change requests are recorded in the KRMA database with the Change Management System (CMS). The change is assessed through the CMS via a set of pre-established questions that are answered by department representatives and then by the responsible superintendent.

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. Oracle 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.

The operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. At both Fimiston and Gidji, this includes operator field inspections undertaken in conjunction with automatic monitoring; logsheets completed each shift to prompt operators to inspect certain parameters; automatic alarms when parameters have strayed outside of the required set values; monitoring the addition of cyanide online via the DCS system; and regular inspections and preventative maintenance of cyanide facilities.

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 that 0.5 mg/L weak acid dissociable (WAD) cyanide and for all such equipment to be subject to planned inspections.

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.

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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 are 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.**

The operation is

☒ **in full compliance with**

☐ 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.
- 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 Inc. 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.

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- 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 incorporate 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 Department of Commerce (DoC) (formally under the auspice of the Department of Consumer and Employment Protection (DoCEP)) 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.

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.

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

The operation is

☒ **in full compliance with**

☐ 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 16 exceedances at Fimiston between 2014 and 2014. 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.

Historically, monthly WAD cyanide samples were taken from the Gidji Toe Dam which was netted and was always above 50 parts per million (ppm). In mid-2011, the KCGM Environmental Department stopped sampling the Toe Dam which was netted and of no consequence to wildlife. Instead monthly samples of the Toe Drain were taken as it had started to express solution as documented in a Golder April 2011 report. The Toe Dam was also always high in WAD cyanide levels. Prior to this point environmental personnel had used both the Toe Drain and Toe Dam labels interchangeably. Due to this confusion over the sample's origin, the processing team thought the high results were of no consequence as there was netting in place (Toe Dam), when in reality there was not (Toe Drain).

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The issue was identified in a monthly meeting used to review Cyanide Code exceedances. At this point (May 2013), the Toe Drain was recognised by KCGM as an 'open water body' exceedance. The water quality results from the seepage interception trench (which takes some of the flow from the Toe Drain) identified 4 sporadic instances over a 12 month period where WAD cyanide levels were elevated above 50 mg/l. Re-sampling, however always returned low WAD cyanide levels.

In early 2013, KCGM requested Sustainability review WAD cyanide compliance issues at both Fimiston and Gidji. Monthly review meetings were established between the environmental and processing departments. It was determined that incident reports had not been raised for the high WAD cyanide levels in part due to the confusion between what was netted and what was un-netted. The Toe drain solution is shallow and WAD cyanide levels generally range between 100 and 200 mg/l.

Once KCGM were aware of the issue a MAP was raised and actions allocated to various site personnel resulting in the netting of the Gidji Toe Drain and a diversion of the Toe Drain water away from the Gidji Seepage Trench to reduce the potential for elevated WAD cyanide levels in the trench.

Work on netting and diverting the Gidji Toe Drain started on Monday the 29 July and was completed by the end of August 2013 resolving the issue. Additional work was undertaken on the Seepage interception trench to clean out the drain and make it fall to one end and it was back filled with screened rock to reduce water pooling within the trench. Completion of the new sump installation to pump water collected in the Toe Drain to the netted Decant Pond was completed in November 2013.

Since its identification, KCGM has applied a rapid effort to correct the deficiency through netting and diversion works. The operation has also implemented systematic changes such as interdepartmental meetings to discuss sampling and Cyanide Code issues to prevent a reoccurrence.

No exceedances have occurred at the Gidji facility since August 2013.

KCGM has engaged a contractor to undertake weekly wildlife monitoring at the Fimiston TSFs and other open water bodies in accordance with a detailed procedure. The TSFs and associated ponds/trenches are inspected on a three hourly (Fimiston) and four hourly (Gidji) basis by process technicians who note wildlife mortalities.

The Environment Department also under take weekly Environmental inspections of the facilities to inspect for a number of parameters including wildlife mortalities. A review of the inspection check sheets confirmed that these inspections are being undertaken. No wildlife deaths on open water bodies have been recorded during the audit period.

The operation does not use a heap leach process.

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

The operation is

☒ **in full compliance with**

☐ 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.

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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.

The operation is

☒ **in full compliance with**

☐ 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 down gradient 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 down gradient 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 in groundwater immediately beneath and down gradient of the TSF has been less than the set limit.

The Department of Environment Regulation (DER) licence (formerly under the auspice of the Department of Environment and Conservation) 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 DER 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 DER has chosen not to assign a groundwater WAD cyanide limit and associated compliance points for such a limit. The Government acknowledges that the hypersaline nature of the groundwater overrides any 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.

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

The operation is

- ☒ **in full compliance with**
- ☐ 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.

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.

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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 QA/QC procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

The initial certification audit documented that QA/QC 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 QA/QC programs for expansions and new cyanide facilities since the initial certification.

Quality control and quality assurance records are retained for works on cyanide facilities including the storage tanks and dosing systems at both Fimiston and Gidji by the Engineering department.

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 suitable site experience.

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

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.

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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 2011 and 2014 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 Kaltails and four hourly at Gidji.

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.

The operation is

☒ **in full compliance with**

☐ 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 developed written procedures to decommission cyanide facilities at the cessation of operations. KCGM has developed a cyanide decommissioning plant that details the process to be undertaken at decommissioning. The decommissioning plan covers the facilities at Fimiston and Gidji and the connecting infrastructure.

Appendix F of the KCGM Fimiston Mill and Gidji Roaster Decommissioning Plan contains the decommissioning 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 decommissioning plan does have an implementation schedule.

KCGM reviews its decommissioning procedures for cyanide facilities during the life of the operation and revises them as needed. The decommissioning plan was updated in 2014 to reflect current market rates for implementation of the plan. The previous revision of the plan was undertaken in 2011.

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

The operation is

☒ **in full compliance with**

☐ 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.

KCGM has established an assurance mechanism capable of fully funding related decommissioning activities.

KCGM has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its cyanide decommissioning plan. The cost estimate was originally developed in 2008. KCGM has reviewed and updated the cost estimate within the last five years and when revisions to the decommissioning plan are made that effect cyanide-related decommissioning activities. The most recent update was completed in 2014.

KCGM has established a financial mechanism approved by the applicable jurisdiction to cover the estimated costs for cyanide-related decommissioning activities as identified in its decommissioning and closure strategy.

The Government of Western Australia introduced the Mining Rehabilitation Fund (MRF) on 1 July 2013 and became mandatory on 1 July 2014. The MRF provides a pooled fund levied according to the environmental disturbance existing on a tenement at the annual reporting date. This system replaces the previous bond system. KCGM has completed the necessary registration for this system and has paid the levy imposed by the regulator. The bonds in place previously were sufficient to cover the costs of decommissioning for Fimiston and KCGM demonstrated financial assurance for Gidji. The decommissioning costs were updated in 2014 around the time the MRF became compulsory and have paid the levies required under the MRF. Accordingly, KCGM has met the requirement for financial assurance.

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.

The operation is

☒ **in full compliance with**

☐ 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.

The KCGM integrated management system (KIMS) consisting of 15 Management Standards that follow the plan-do-check-act model and provide the basis for managing safety, environment and community aspects for the operation. These standards are complimented by procedures and local work instructions which provide detailed information on how to perform tasks including unloading, plant operations, entry into confined spaces and equipment decontamination prior to maintenance.

The operation has a three level isolation process based on positive isolation and a detail confined space entry and permit to work procedure. Work Instructions support these management level procedures and there are a series of work instructions for cyanide related tasks. Equipment decontamination is addressed through the isolation procedure generally together with the procedures for flushing cyanide pumps, lines and dosing points.

KCGM procedures address the use of PPE and KCGM has implemented a pre-work inspection process. The field level risk assessment (FLRA) is used by workers to assess the workplace before each task in addition to the Work Instructions specific for the task. The task procedures detail the PPE necessary for the specific tasks. The site inspection confirmed that workers were using PPE and conducting pre-work inspections.

KCGM has a Change Management Procedure for the purpose of providing a common framework for the systematic and structured management of changes at KCGM. The procedure requires the assessment of the change for safety and environmental impacts of the proposed change. Change requests are recorded in the KRMA database with the CMS. The change is assessed through the CMS via a set of pre-established questions that are answered by department representatives and then by the responsible superintendent. The operation has defined a number of risk assessment tools (FLRA, JHA, TBRA, HAZOP, OMAT).

A cyanide destruction facility was introduced at Gidji and a change management record was provided in the CMS. Recently, the unloading platforms at Fimiston Mill and Gidji Roaster were modified during the audit period and the change was assessed and recorded within the CMS.

KCGM actively solicits and actively considers worker input in developing and evaluating health and safety procedures. The intranet system includes details of the work crew that reviewed the updated work instructions. There is also a formalised health and safety committee at the operation that provides another mechanism for consultation with the work force and KCGM has a formalised process for seeking and reviewing worker suggestions that includes health and safety procedures.

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.**

☒ **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 an operation 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 pH to minimise the evolution of HCN at is operation. The CIL's 2 & 3 is run at pH of 8.7 and pH of 12.5 for CIL 1. The set point of 8.7 for the CIL is related to the water quality and practicality. KCGM receives liquid cyanide from AGR and the pH is set by the manufacturer. No mixing activities occur at either Fimiston or Gigji.

KCGM utilises personal monitoring devices to confirm that controls are adequate to limit worker exposure to hydrogen cyanide gas to 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period.

Toxipro personal HCN monitors are used at the Fimiston Mill and are required to be worn when entering the cyanide delivery area, CIL, intensive leach reactor and elution circuit. BW GasAlert HCN monitors are used at Gidji Roaster and are required to be worn when entering the cyanide area including the delivery area. Both devices are set to alarm at 4.7 and 10 ppm with designated actions associated with each alarm level.

KCGM has identified areas and activities where workers may be exposed to cyanide in excess of 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period and require the use of PPE in these areas or when performing these activities.

At KCGM, HCN monitoring equipment is maintained, tested and calibrated as per the manufactures instructions. A review of records for the individual and multigas monitors shows that records are retained for at least one year. The operation has an onsite calibration station and maintains electronic records of bump tests and calibrations.

Warning signs have been placed where cyanide is used and at the entrance points to the leaching areas, advising workers that cyanide is present and that smoking, open flames and eating and drinking are not permitted. Signage also reminds personnel of the minimum PPE requirements for the area. KCGM provides designated facilities for eating and drinking, and these activities are restricted to areas away from cyanide. Designated smoking areas are provided away from areas where cyanide is used or stored.

Access is restricted to the processing plant areas, with no one permitted to enter the processing plant area until the necessary inductions have been completed which include cyanide awareness training or they are escorted by a fully inducted person.

Showers, low-pressure eyewash stations and dry powder fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis.

KCGM conducts a rotational inspection program for the sites where each area is inspected by operational personnel. This inspection includes checking the operation of each emergency shower and eyewash station, and confirming that fire extinguishers are provided and are in a serviceable condition. In addition to the rotational inspections conducted by the operators, there is a planned maintenance repetitive work order for the showers and a contract for the inspection, maintenance and servicing of fire extinguishers across the operation.

During the site inspection showers, eye wash stations and fire extinguishers were checked and found to be in working order with relevant service tags attached and in date.

The unloading, storage, mixing and process tanks, and piping containing cyanide is identified to alert workers of their contents, the direction of cyanide flow in pipes is designated.

KCGM implements a pipeline colour coding system and the key is displayed at the entrance to the processing area. Cyanide pipework is coloured purple/lilac and there is an ongoing maintenance program to replace pipe labels as they deteriorate or become illegible. The pipework observed during the site inspection had directional indications showing the direction of flow in the pipes.

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All tanks possess signage indicating the presence of cyanide including statutory HAZCHEM signage. Tanks have been painted with a purple/lilac band with danger signage located near confined space entry points.

Material Safety Data Sheets (MSDS), first aid procedures or other informational materials on cyanide safety in the language of the workforce are available in areas where cyanide is managed. The Chemwatch database is updated via service agreement to maintain MSDS within the 5 year period and is accessible to all personnel on site via the intranet. Additionally cyanide safety information is displayed at the unloading areas and includes information on first aid procedures.

KCGM has implemented an Accident Incident Reporting System (AIRS) that is used to report and record all injuries, incidents, hazards and near misses. The level of investigation associated with each report is dependent on the worse case credible outcome of the incident using KCGMs risk matrix tool.

KCGM utilises Taproot as their investigation tool for high level incidents and a standard AIRS report for low level incidents. A review of the AIRS database showed that there is a strong reporting culture at the site and that no cyanide exposures had occurred during the audit period.

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

The operation is

- ☒ **in full compliance with**
- ☐ 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.

The operation does have water, oxygen, a resuscitator, antidote kits, a radio, telephone, alarm system or other means of communication or emergency notification readily available for use at cyanide unloading, storage and mixing locations and elsewhere throughout the plant.

The Cyanide Unloading Procedure requires the observer to have a two-way radio to communicate with the control room. There are also public address (PA) systems at both the Fimiston and Gidji plant sites allowing the observer or other personnel to raise the alarm. The PA system locations are indicated during the site orientation and are clearly signposted.

KCGM exhibits an adequate water supply for cyanide decontamination purposes through the emergency shower system or through fire response infrastructure. The operation does have emergency oxygen equipment (i.e. oxy viva) positioned strategically within the plant areas near where cyanide is unloaded or mixed. The oxygen equipment is subject to regular inspection and planned periodic maintenance.

Additional response equipment is stored with the other emergency response equipment at the main security gate complex away from the process plant.

KCGM inspects its first aid kits on a monthly basis with the replenishment of first aid kits facilitated by the full time onsite occupational health nurses. Cyanide antidote kits are stored at the onsite medical facility located at the gatehouse and the occupational health nurse is responsible for ensuring the antidote kits are stored correctly and in date. The CYANOKIT (Batch No. 7003-0014 and 7005-0023) on site was inspected and found to be in date. The CYANOKIT was stored in the refrigerator in the medical centre.

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KCGM trauma kits are stored at the medical facility and are stocked with non-perishable items. Once a kit is opened the contents are replaced with a full kit. The medical centre has an adequate store of first aid supplies that can be used to replenish first aid kits.

The KCGM security personnel are responsible for the administration of the maintenance contract for oxygen equipment and coordination with the occupational health nurse for the annual servicing of the oxy viva units.

KCGM has developed specific written emergency response procedures for cyanide emergencies and exposures. The cyanide emergency procedures form part of the KCGM emergency management plan and address cyanide emergencies, exposures and environmental releases including detoxification procedures and decontamination.

This plan together with the site emergency management procedures provides the framework for managing cyanide related emergencies of various scale and complexity. The procedures cover immediate first aid measures to be taken through to evacuation of the person to the Kalgoorlie Regional Hospital.

KCGM does have on-site capability to provide first aid to workers exposed to cyanide. The Emergency Response Team are the primary responders in the event of an emergency and have either occupational first aid or senior first aid training. The Emergency Response Team is complimented by two full time occupational health nurses that would provide first aid treatment to persons recovered from an incident by the Emergency Response Team and would administer the cyanide antidote if necessary.

The Fimiston site has a fully equipped ambulance with an oxygen supply and a medical treatment room located at the gate house. The Gidji site has a small unmanned medical treatment room located adjacent to the administration area that is not manned. The Emergency Response Team would mobilise from Fimiston to Gidji in the event of an emergency.

All personnel are instructed in actions to take in the event of a cyanide exposure, and there are emergency showers and oxy viva equipment located at strategic locations throughout the plant sites.

KCGM has developed procedures to transport workers exposed to cyanide to Kalgoorlie Regional Hospital. Kalgoorlie Regional Hospital is the main medical resource for the region and can arrange for transport of patients to Perth for further treatment if necessary. KCGM has made formal arrangements with Kalgoorlie Regional Hospital which has the resources (as a regional hospital, the facility has a staff emergency department and on-call specialists) to care for cyanide exposure cases and liaised with the medical staff at the hospital to inform them that they use cyanide at both sites and there is potential for an incident. Kalgoorlie Regional Hospital has agreed to stock sodium thiosulfate and KCGM will stock the CYANOKIT that can be administered en route to the hospital.

Gidji operations have a personnel carrier that could be used to transport an exposed person to Kalgoorlie Regional Hospital if necessary. The procedure is for Gidji to call both the KCGM Emergency Response Team and St John's ambulance service, and whoever responds quickest would be used to transport the person to Kalgoorlie which is approximately 20 minutes by road.

KCGM conducts emergency drills periodically to test response procedures for various cyanide exposure scenarios. KCGM conducted full scale personnel exposure emergency drills in 2013 at the Gidji Operations and 2014 at Fimiston. Actions developed from the drills are entered and tracked through the KRMA database. In addition to cyanide-specific drills, the operation undertakes regular plant evacuation drills including the night shift. The Emergency Response Team participates in regular drills and training onsite; and participate in the annual emergency response event where Emergency Response Teams from other operations get together for a week-long training and drill event.

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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.

The operation is

☒ **in full compliance with**

☐ 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.

KCGM has developed an Emergency Response Plan to address potential accidental releases of cyanide. The operation has developed a tiered approach to emergency response, with local emergency response plans, a site crisis management plan and a cyanide-specific emergency response plan. The Cyanide Emergency Response Plan has been developed to address potential accidental cyanide releases and to respond to cyanide exposures; this plan sits within the emergency management framework. The plan includes a cyanide decontamination procedure, a detoxification procedure and an environmental spill procedure.

KCGM has developed specific written cyanide emergency procedures that address the response to anticipated cyanide emergencies. Section 5.1 of the Cyanide Emergency Procedure lists the types of emergencies considered in the plan and the applicable appendix. The following cyanide related pre-determined response plans are provided:

- Cyanide spill (wet)
- Cyanide related
- HCN release greater than 50 ppm
- Cyanide transport accident
- Cyanide involved in fires
- Spill reagent area (Fimiston and Gidji).

Failure of tailings impoundments are addressed in the operating manuals for the TSFs and generally under the emergency response plan. The TSF manuals contain sections on emergency management in the event of TSF failures including contact of users of the Australian Southern Rail line.

The Cyanide Emergency Procedure does not address power outages and pump failures as KCGM has determined these scenarios do not warrant the development of specific separate emergency response predetermined plans. 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. In the event that a non-power related pump failure resulted in a spill of cyanide solution, it would be addressed in the 'liquid spills' emergency response predetermined plan.

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KCGM, through their relationship with AGR and AGR's Transport Management Plan for Sodium Cyanide Product, are compliant with the requirement for planning a response to transportation-related emergencies, considering transportation route(s), physical and chemical form of the cyanide, transport method (e.g. rail, truck), the road or railway condition and the transport vehicle design (e.g. single or double walled, top or bottom unloading). AGR remains responsible for the cyanide until it is delivered into KCGM's storage tanks by AGR with observers employed by KCGM.

Planning for the response to transport related emergencies in the vicinity of KCGM operations has been included in the KCGM Cyanide Emergency Response Plan. The plan covers the transport via road by 36.5 m road-trains carrying two top loading isotainers of 30% cyanide solution. The transport vehicles travel a predetermined route on sealed, well-maintained roads.

KCGM controls vehicle site entry and acid delivery vehicles are not permitted on-site at the same time as cyanide deliveries.

KCGM will provide assistance to AGR and the Department of Fire and Emergency Services (DFES) in the event of transport related emergencies outside the operation's lease area. There is a Memorandum of Understanding between KCGM and DFES.

At the Gidji site, the procedure for a major spill is to call out the KCGM Emergency Response Team based at the Fimiston site. This is highlighted in the Gidji emergency procedures. The cyanide unloading facility is located on the outer side of the processing plant area between the process plant and the TSF.

KCGM plans and procedures describe specific response actions (as appropriate for the anticipated emergencies), such as clearing site personnel from the exposure area, cyanide antidote use and first aid measures.

The Cyanide Emergency Response Plan provides pre-determined 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.

KCGM has undertaken a modelling exercise to determine the likely impact and spread of HCN gas at its Fimiston operation which has residential areas in proximity of the site. 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.

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

The operation is

☒ **in full compliance with**

☐ 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 (including potentially affected communities) in the cyanide emergency response planning process.

KCGM has involved its workforce and the external emergency responders in the cyanide emergency response planning process. KCGM implements a formal process for reviewing documents and forwarding them to crew members.

KCGM involve local response agencies such as outside responders and medical facilities in the cyanide emergency planning and response process.

KCGM has a mutual aid agreement – Memorandum of Understanding with DFES, which permits joint emergency training for the possible emergency scenarios which may occur at the Fimiston and Gidji sites including cyanide. The Emergency Response Coordinator attends the Local Emergency Management Committee for the region which involves the local authority, DFES, other operations and stakeholders.

KCGM has also liaised with St John Ambulance and Kalgoorlie Regional Hospital in relation to treating and managing cyanide exposures.

The Community Reference Group (CRG) is the 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. The CRG is also part of the information trail for the Emergency Response Group and is aware of procedures regarding emergency response for cyanide related issues. The CRG has been briefed on the Cyanide Code and KCGM's involvement.

KGCM through the local emergency management committee has made potentially affected communities aware of the nature of their risks associated with accidental cyanide releases, and consulted with them through community representatives regarding appropriate communications and response. KCGMs cyanide related emergency response exercise held in 2013 was presented in this forum.

Additionally, the CRG is also part of the information trail for the Emergency Response Group and is aware of procedures regarding emergency response for cyanide related issues. The CRG has been briefed on the Cyanide Code and KCGM's involvement.

KCGM has engaged in consultation or communication with stakeholders to keep the Emergency Response Plan current. New Emergency Response Guides have been developed for both Fimiston and Gidji which is a formal consultation process with DFES. However the core elements of the response actions are consistent. The operation has also maintained communications with Kalgoorlie Regional Hospital and St John's Ambulance.

KCGM also conducts monthly safety meetings where the workforce can engage in safety issues including emergency response.

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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.

Elements of the KCGM Cyanide Emergency Response Plan and procedures:

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

b) Identify Emergency Response Teams

c) Require appropriate training for emergency responders

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

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

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

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

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

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. The operation through attendance at local emergency committee meetings and through direct correspondence has confirmed that agencies listed in the plan are aware of their involvement.

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.

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The KCGM emergency response framework includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of a cyanide emergency.

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. The duty cards for a cyanide spill allocate specific communication actions to be undertaken by personnel assuming pre-defined emergency response roles in the event of an emergency. The duty cards facilitate clear communication and escalation of information as needed depending on the circumstances of the incident.

The KCGM emergency response framework includes procedures and contact information for notifying those communities potentially affected by a cyanide-related incident and any necessary response measures, and for communication with the media.

As noted in 7.2, KCGM does not envisage an onsite release to affect the community with the exception of a tailings storage facility failure. KCGMs emergency management framework includes procedures and contact information for notifying those potentially affected of the cyanide related incident and any necessary response measures, and for communication with the media.

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 requiring an operation to incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

The KCGM Cyanide Emergency Response Plan describes specific remediation measures as appropriate for the likely cyanide release scenarios, such as:

a) Recovery or neutralisation of solutions or solids

b) Decontamination of soils or other contaminated media

c) Management and/or disposal of spill clean-up debris.

The provision of an alternate drinking water supply is not applicable to this KCGM operation. Drinking water for the community is supplied via a pipeline to the town that is sourced from the Perth Metropolitan area approximately 650 km from the town.

When no environmental issues are identified, ferrous sulfate is used for cyanide detoxification and clean-up. The Environmental Coordinator is involved in determining containment and clean up actions. The Environmental Coordinator and Emergency Response Team work together to prevent or mitigate the above environmental emergency scenarios.

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The KCGM Cyanide Emergency Response Plan does prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water. The plan states "*Sodium hypochlorite and ferrous sulfate must never be used to treat cyanide that has been released into natural surface water bodies. Both of these chemicals are toxic to aquatic life. Treatment with sodium hypochlorite can produce cyanogen chloride (CICN), which is hazardous to humans and aquatic life*."

The KCGM Cyanide Emergency Response Plan does address 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. There are no flowing waterways in proximity to the KCGM sites and the plan covers field testing of soils and testing of cyanide in the atmosphere.

In addition to the plan, KCGM has developed procedures for remediation of any contaminated soil for cyanide process tanks without secondary containment, such that adverse impacts on surface or groundwater are prevented. The procedures developed cover both low and high strength cyanide solutions and describe a clean-up procedure addressing Code requirements for sampling of the subsurface after initial excavation and for continued excavation and sampling until a pre-determined clean up cyanide concentration has been achieved at the newly exposed ground surface.

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 to periodically evaluate response procedures and capabilities and revise them as needed.

KCGM reviews and evaluates the cyanide related elements of its emergency response plan for adequacy on a regular basis and has recently reviewed its cyanide-specific emergency response plan. Section 17 of the plan details the review process including simulations and drills. The operation has reviewed and updated its cyanide related emergency plan on a number of occasions during the audit period.

Mock emergency drills are conducted periodically as part of the KCGM emergency response plan evaluation process. Section 17 of the Cyanide Emergency Response Plan details the arrangements for testing and documenting simulations and drills. KCGM has conducted two full scale emergency drills during the audit period that have addressed both worker exposure and potential environmental release. In addition to the full scale exercises, the Emergency Response Team engage in regular practical exercises including hazardous material response.

KCGM has provisions in place to evaluate and revise the emergency response plan after any cyanide related emergency requiring its implementation. Section 18 of the plan provides that emergency management documentation shall be reviewed annually or immediately following the occurrence of any internal emergency and relevant external emergencies. There have been no cyanide related emergencies during the audit period that would have triggered this requirement. As noted previously, the operation has reviewed its response plan and mock drills are evaluated.

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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.

The operation is

☒ **in full compliance with**

☐ 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 to train workers to understand the hazards associated with cyanide use.

KCGM implements the training of all personnel who may encounter cyanide in cyanide hazard recognition. Cyanide hazard training is included as part of the Mill Induction Training Program which must be completed by all persons (excluding visitors) prior to being able to access areas that may contain cyanide. All visitors must be escorted at all times by an inducted person and are not permitted to undertake work. The KCGM training package includes a knowledge assessment by the participant that is marked and signed off by the trainer. In addition to the mill induction for processing, operators complete a 2 day new starter training package that provides additional detail in cyanide use in processing.

Cyanide hazard recognition refresher training is periodically conducted. The training is part of the Mill Induction that is completed every two years. The Mill Induction is linked to the access control system that will prevent access to the Mill area if the training has not been completed.

KCGM training records are retained in an electronic database and on hard copy files for each employee and contractor. A review of training records for workers at both KCGM facilities confirmed that records are retained.

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.

The operation is

☒ **in full compliance with**

☐ 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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KCGM employees are trained prior to working with cyanide. 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 before working in the area.

KCGM personnel who may encounter cyanide complete the cyanide awareness and refresher training every two years. 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. If an individual does not successfully complete the course before the expiry date, the person is not permitted to access the site and has to report to security to complete the course.

The KCGM operation also has 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 by the process trainers. An individual cannot operate on their own until they have been assessed as competent. Procedures involving cyanide are part of this system.

KCGM has a contract with a registered training organisation (RTO) that provides verification and assessment of the training provided by KCGM's in-house trainers. KCGMs in-house trainers are experienced in the operation of the facility and hold training and assessing qualifications.

Training and competency for process technician levels is mapped to recognised industry qualifications. Maintenance workers are also trained in cyanide related tasks based on maintenance procedures. The processing trainer coordinator with the process trainers run formal competency-based operator training, which includes cyanide tasks. The shift supervisors are personally involved in the training of new process operators.

The training elements necessary for each KCGM job involving cyanide management are identified in training materials. Formal competency training which includes cyanide tasks is run by the Process Trainer Coordinator and Process Trainers at Fimiston and Gidji out in the plant. All personnel are trained and assessed in procedures relating to cyanide tasks prior to allowing them to work independently. The competency training is based on the resources and infrastructure training package and supported by the task procedures.

The KCGM operation evaluates the effectiveness of cyanide training by testing, observation or other means. KCGM individuals complete a written assessment at the conclusion of the cyanide awareness training and the key learning outcomes of the awareness session are reinforced by the trainer. KCGM has also implemented an observation safety system, where there are peer observations of crew members undertaking processing tasks. This program also includes cyanide related tasks.

KCGM records are retained throughout an individual's employment documenting the training they receive. The records include the names of the employee and the trainer, the date of training, the topics covered, and if the employee demonstrated an understanding of the training materials. In-house KCGM training records are maintained in the training database accessible through the intranet system. Certificate course training records are maintained on the individual's file in hard copy and an electronic version is maintained through the operation's contract with a RTO that provides verification and assessment of the training provided by KCGM's in-house trainers. Personal training information related to certificate courses is stored on the TUTIS database. Hard copies of training records are maintained by the Training Department and were verified by the auditor at the Fimiston and Gidji operations.

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

The operation is

☒ **in full compliance with**

☐ 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 to train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

All KCGM cyanide unloading, mixing, production and maintenance personnel are trained in the procedures to be followed if cyanide is released. Response to incidents and emergency situations is covered in the induction process that all employees must complete. Cyanide specific aspects are covered in the cyanide awareness training material and via task specific procedures.

KCGM site cyanide response personnel, including unloading, mixing, production and maintenance workers, are trained in decontamination and first aid procedures. They take part in routine drills to test and improve their response skills.

The KCGM cyanide awareness course that is completed at induction and every two years 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.

KCGM Emergency Response Coordinators and members of the Emergency Response Team are trained in the procedures included in the Emergency Response Plan regarding cyanide, including the use of necessary response equipment. The Emergency Response Team complete industry recognised training in fire, hazardous materials, breathing apparatus and fire aid response. The skills and knowledge attained through industry recognised courses are supplemented through weekly training and drills. In addition to the weekly training sessions, the operation has conducted full scale cyanide specific mock exercises.

The KCGM operation made off-site Emergency Responders, such as community members, local responders and medical providers, familiar with those elements of the Emergency Response Plan related to cyanide. KCGM has a mutual aid agreement with DFES and have adopted DFES procedures for response to HAZMAT incidents.

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

The Cyanide Exposure Procedure describes the medical care and medical instructions for pre-hospital treatment. This procedure has been provided to Kalgoorlie Regional Hospital and agreement reached on treatment and use of CYANOKITS.

KCGM site cyanide response personnel, including unloading, mixing, production and maintenance workers, are trained in decontamination and first aid procedures. This is covered through the cyanide awareness training that is undertaken every two years.

There is a training matrix for the emergency Response Team which includes, for example, HAZMAT training, fire under breathing apparatus, rope rescue and vehicle extraction. Training occurs on a weekly basis and rotates through topics including HAZMAT and cyanide response.

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Simulated cyanide emergency drills are periodically conducted for KCGM training purposes. The operation has conducted two full scale emergency drills during the audit period that have addressed both worker exposure and potential environmental release. In addition to the full scale exercises, the Emergency Response Team engage in regular practical exercises including hazardous material response and conduct evacuation drills to train and reinforce actions to be taken in the event of an emergency.

KCGM debrief reports and 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.

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.

KCGM attendance records for cyanide awareness training are maintained in hard copy by the processing training coordinator. Training records for the Emergency Response Team members are maintained by the Emergency Response Coordinator. A review of training records confirmed they detail the course delivered, the presenter, the date and the names of those attending. The associated assessment sheet for the cyanide awareness course has the name of the person completing the assessment, date of the assessment, outcome and the trainer.

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 regarding the management of cyanide.

KCGM does provide the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide. KCGM maintains a Community Relations Group (CRG) dedicated to community relations issues for KCGM, including the Fimiston and Gidji Operations. The CRG consists of a Community Relations Superintendent, a Community Relations Coordinator, a Communications Coordinator and a Community Relations Assistant.

The KCGM CRG typically 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."

Members of the community are encouraged to approach the CRG to raise issues directly with the group and their contact details are provided on the KCGM website.

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In addition, KCGM operate a 24-hour Public Interaction Line (PIL) 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 PIL system and any actions are tracked through to closeout. The KCGM website also provides a contact email mechanism for interested parties to raise a concern on the "Contact Us" page.

Hannans North Tourist Mine provides another avenue where public enquiries can be made in person. It is located off the Goldfields Highway, 1.5 km left from the top end of Hannan Street. It is open Sunday to Friday from 9 am – 4 pm.

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.

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.

For internal stakeholders, KCGM has the following mechanisms to provide information on cyanide:

- KCGM has developed a Cyanide Code Information System (CCIS) that is located on the KCGM intranet site that contains all information relating to cyanide management and their obligations under the International Cyanide Management Code (ICMC). All internal stakeholders with access to a computer terminal can access this information.
- In addition, KCGM has developed a cyanide awareness training package that is delivered to all employees and contractors that have the potential to access cyanide at KCGM. The training package consists of a video produced by AGR, a site-specific presentation produced by KCGM and an assessment of knowledge and skills.

For both internal and external stakeholders, KCGM has the following mechanisms to provide information on cyanide:

- KCGM has developed Information Sheets, which provide a background on the different aspects of the KCGM operations, are published on the KCGM website and distributed through the Shop at the Hannans North Tourist Mine and on site. A Cyanide Information Sheet was published in June 2014.
- The Dirt is published monthly on the KCGM website and distributed by email and printed copies across site. It has carried relevant stories on the ICMC and related projects, for example commissioning of the Cyanide destruct plant in January 2013.

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For external stakeholders, KCGM has the following mechanisms to provide information on cyanide:

- KCGM has developed a media and public disclosure policy that dictates the initiation of dialogue with the community, including:
  - Release of material information
  - Media and public requests
  - Crisis and emergency events.

  One media release regarding cyanide has been released during the recertification audit cycle, and was in relation to the official receipt of ICMC compliance (released 3 October 2008).
- The KCGM CRG (The KCGM CRG typically meets once a month with KCGM representatives to discuss operational issues and to provide feedback from the public. Members of government departments are frequently invited to such meetings.
- The KCGM PIL (enables members of the community to contact the company on a wide range of issues including emergencies, complaints inquiries and feedback).
- 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.

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

The operation is
- ☒ **in full compliance with**
- ☐ 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 annual environmental report (AER) to the Department of Mines and Petroleum (DMP) and the Department of Environment Regulation (DER). 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 through the KCGM website.

All mining operations within Western Australia are required to report serious occurrences and mining injuries (including cyanide exposures) to the Department of Mines and Petroleum (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.

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KCGM makes information publicly available through the following mechanisms:

a) Cyanide exposures resulting in hospitalisation or fatality are communicated to the community via the Community Reference Group (CRG) and press announcements are prepared for release. Incident such as these also require reporting to the relevant regulators.

b) Cyanide releases off the mine site requiring response or remediation are reported to the Community Reference Group (CRG) and pro-active media management.

c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment are reported to the Community Reference Group (CRG) and pro-active media management.

d) Cyanide releases on or off the mine site requiring reporting under applicable regulations are reported to the DMP and DER annually via the AER. Cyanide incidents are also reported to the DER via the Annual Audit Compliance Report (AACR) and The Office of Environment Protection (OEPA) via the AACR (different report) which are made publicly available through the KCGM, Newmont and Barrick websites. In addition reporting to the Community Reference Group (CRG) and pro-active media management may be carried out.

Releases that are or that cause applicable limits for cyanide to be exceeded (for example releases such as seepage containing very low levels of WAD CN) are monitored according to scheduled sampling tasks and results are reported to the DER as part of license conditions on a quarterly basis as part of the Quarterly Groundwater Reports. As per the requirement of the Contaminated Sites Act (2003) and Regulations (2006) KCGM reported all suspected contaminated sites to the DER on 31 May 2007, including the Fimiston TSFs and groundwater plumes, Gidji TSF seepage plume and the Gidji TSF as suspected contaminated sites. Preliminary site investigation is ongoing. Any releases are also reported within the AER as necessary.

LIMITATIONS

Your attention is drawn to the document “Limitations”, which is included as Appendix A to this report. This document is intended to assist you in ensuring that your expectations of this report are realistic, and that you understand the inherent limitations of a report of this nature. If you are uncertain as to whether this report is appropriate for any particular purpose please discuss this issue with us.

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APPENDIX A

Limitations

LIMITATIONS

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