



June 2016

ICMI GOLD MINE RECERTIFICATION AUDIT - SUMMARY AUDIT REPORT

Evander Gold Mine

Submitted to:

International Cyanide Management Institute,
888 16th Street, NW-Suite 303,
Washington, DC 20006,
USA

Evander Gold Plant
South Africa

REPORT

Report Number. 1653518

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Table of Contents

1.0 SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS.....	1
SUMMARY AUDIT REPORT	2
Auditors Findings.....	2
Name of Other Auditors.....	2
Dates of Audit.....	2
PRINCIPLE 1 – PRODUCTION	3
PRINCIPLE 2 – TRANSPORTATION.....	4
PRINCIPLE 3 – HANDLING AND STORAGE	6
PRINCIPLE 4 – OPERATIONS.....	8
PRINCIPLE 5 – DECOMMISSIONING	16
PRINCIPLE 6 – WORKER SAFETY.....	18
PRINCIPLE 7 – EMERGENCY RESPONSE	22
PRINCIPLE 8 – TRAINING.....	27
PRINCIPLE 9 – DIALOGUE	30



1.0 SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS

Name of Cyanide User Facility: Evander Gold Mine
Name of Cyanide User Facility Owner: Evander Gold Mining (Pty) Ltd
Name of Cyanide User Facility Operator: Evander Gold Mining (Pty) Ltd
Name of Responsible Manager: Mark Annetts, Chief Safety Officer
Address: Private Bag X1012, Evander, 2280 Mpumalanga
Country: South Africa
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2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION

Pan African Resources concluded the acquisition of Evander Gold Mines from Harmony in February 2013. Pan African Resources is the sole shareholder of Evander Gold Mining (Pty) Ltd.

The Evander Gold Plant (also referred to as the Kinross Gold Plant) is situated in the town of Evander, in Mpumalanga Province, South Africa, approximately 134 km east of Johannesburg. The plant treats ore from Evander No. 8 Shaft and old tailings etc.

There are six SAG mills operating in closed circuit with a hydro cyclone. A portion of the cyclone underflow is directed to Knelson centrifugal concentrators for the recovery of free gold. There is one Knelson concentrator for every two milling units. The milled product is nominally 80% passing 75 microns. The mill section is non-cyanide exposed as it utilises non contaminated underground water for dilution and gland service water.

The cyclone overflow is directed, via linear screens, to five thickeners (of which two are utilised for the current throughput). The thickened pulp is transferred to the leach, CIP/CIL, circuit via a surge tank into which liquid sodium cyanide is added. The leach configuration is based on one surge tank, two leach tanks, four CIL tanks and seven leach tanks. Eight of the fourteen flat bottomed tanks are air agitated and six are mechanically agitated. Oxygen is injected into the first mechanically agitated leach tank. The tailings from the leach train proceed to the CIP circuit, consisting of six flat bottomed, mechanically agitated, vessels. Virgin and regenerated carbon is added to the last tank of the CIP circuit and is transferred up the train to the first vessel. The partially loaded carbon is transferred to the last vessel in the CIL train, prior to being moved to the head of the CIL. Loaded carbon is screened and forwarded to ZADRA elution in two columns and associated electro winning cells. Eluted carbon is regenerated via a Rotary Kiln before being acid treated. The cathodes are cleaned and the gold sludge filtered and dried, prior to being transported to Rand Refinery.

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Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





SUMMARY AUDIT REPORT

Auditors Findings

Evander
Gold Plant is: in full compliance with **The International Cyanide Management Code**
 in substantial compliance with
 not in compliance with

Audit Company: Golder Associates Africa (PTY) Ltd
Audit Team Leader: Ed Perry, Lead Auditor
Email: eperry@golder.com

This operation has experienced compliance problems during the previous three-year audit cycle which are discussed in this report under Standard of Practice 6.2 of the International Cyanide Management Code Verification Protocol for Gold Mine Operations.

Name of Other Auditors

Marie Schlechter, ICMI pre-certified Mine Technical Specialist

Dates of Audit

The Re-certification Audit was undertaken between 28 March 2016 and 1 April 2016.

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 Verification Protocol for Gold Mine Operations and using standard and accepted practices for health, safety and environmental audits.

<u>Evander Gold Plant</u>		<u>30 June 2016</u>
Name of Facility	Signature of Lead Auditor	Date

Evander Gold Plant
 Name of Facility

30 June 2016
 Date

Signature of Lead Auditor



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:

The operation is in full compliance with Standard of Practice 1.1 to 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.

Cyanide has been purchased from Sasol Polymers South Africa for the duration of the recertification period. Date of recertification for Sasol Polymers is 29 March 2016 with the prior recertification being dated 7 May 2013.

The operation's contract with the cyanide manufacturer (Sasol), Memorandum of agreement for the supply of sodium cyanide to all Harmony Gold Plants, Ref No. CS/09/05/0021 dated 03 February 2010, requires that the cyanide be produced at a facility that has been certified as being in compliance with the Code. This contract is still in force as the mine was sold as a going concern.

Evander Gold Plant
Name of Facility

Handwritten signature of Lead Auditor

30 June 2016
Date

Signature of Lead Auditor





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:

The operation is in full compliance with Standard of Practice 2.1 to establish clear lines of responsibility for safety, security release prevention, training and emergency response in written agreements with producers, distributors and transporters.

There a written agreement, between the operation, the cyanide producer (Sasol), and transporter (Tanker Services) - Memorandum of agreement for the supply of sodium cyanide to all Harmony Gold Plants by Sasol, Ref No. CS/09/05/0021 dated 03 February 2010, and Memorandum of agreement for the off-loading of liquid sodium cyanide, between Tanker Services Food and Chemicals Division and Evander Gold Mining (Pty) Ltd, dated 22 March 2016.

These agreements designate responsibilities for the following::

- a) Packaging as required by the United Nations for international shipments and by the political jurisdiction(s) the shipment will pass through.
- b) Labelling in languages necessary to identify the material in the political jurisdiction(s) the shipment will pass through, and as required by these jurisdiction(s) and by the United Nations (for international shipments).
- c) Storage prior to shipment.
- d) Evaluation and selection of routes, including community involvement.
- e) Storage and security at ports of entry.
- f) Interim loading, storage and unloading during shipment.
- g) Transport to the operation.
- h) Unloading at the operation.
- i) Safety and maintenance of the means of transportation (e.g. aircraft, vessels, trains, etc.) throughout transport.
- j) Task and safety training for transporters and handlers throughout transport.
- k) Security throughout transport.
- l) Emergency response throughout transport.

The agreement with Sasol states that “neither party may cede or assign any of its rights or delegate its obligations in terms of this Agreement without the prior written consent of the other Party having been obtained first”. The agreement between Tanker Services and Evander does not provide for any of the services to be subcontracted.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

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:

The operation is in full compliance with Standard of Practice 2.2 to require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

Memorandum of agreement for the supply of sodium cyanide to all Harmony Gold Plants, Ref No. CS/09/05/0021 dated 03 February 2010.

Section 8.2 states that the seller as well as the transporter will be ICMI compliant, over and above the aforementioned national regulations.

Chain of Custody Records state that Tanker Services delivers liquid Sodium Cyanide from the Sasol manufacturing facility in Sasolburg to Evander Gold Mine with no stops.

The cyanide transporter (Tanker Services) is certified under the Code and has been used for the full recertification period.

Tanker Services Specialised Products Division - recertified on 17 July 2015 with the prior certification dated 13 December 2011.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date

June 2016
Report No. 1653518



PRINCIPLE 3 – HANDLING AND STORAGE

Protect Workers and the Environment during Handling and Storage

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:

The operation is in full compliance with Standard of Practice 3.1 to 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.

The current cyanide storage tanks were reconstructed in 2010.

The previous re-certification audit found the following

“The old facility was replaced with a new facility. The facility was designed by Engineers from Harmony Engineering, Welkom, ELROX Engineering and inspected by the cyanide producers representative - sighted available design drawings (Signed by S I Bester ECSA (Engineering Council of South Africa) No 850123)

- ! Chemical Storage facility tank foundation Drawing No.433-0002-002-N034;
- ! Cyanide storage tank A & B Design Data notes No. Elr199s01 rev1; and
- ! Cyanide storage tank A & B Arrangement and details Drawing No. Elr199s02 rev1. “

Sodium Cyanide Bulk Storage Facility Technical Inspection Reports are conducted annually by Sasol Base Chemicals Supply Chain (Cyanide Manufacturer).

The Cyanide unloading and storage areas are located inside the Evander Gold Plant, which has security and access control. The Cyanide unloading and storage areas are locked.

Unloading and storage areas are located away from people and surface water. The cyanide storage tanks are located separately from incompatible materials such as acids, strong oxidizers and explosives. Both cyanide storage tanks are fitted with ventilation pipes

The liquid cyanide is unloaded on a concreted bunded surface. The bund is constructed to contain any spilled cyanide. Any spilled cyanide can flow back into the storage bund for the cyanide tanks. Reagent strength cyanide will be pumped back into the storage tank. Rainwater mixed with cyanide will be pumped into the CIP tanks. The storage tanks are constructed on a concrete plinth and sealed to prevent seepage to the subsurface.

An automatic valve has been fitted on the air supply used during offloading that will shut down if the storage tank level reaches 85%.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 3.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 3.2 to operate unloading storage and mixing facilities using inspections, preventative maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

Liquid cyanide is delivered in bulk tankers and no containers are used.

Procedure EVP 43 Liquid Cyanide Off-loading Procedure Rev 00 includes the following:

- Driver to wash the outer surface of the tanker and all close all openings and blank flanges;
- Wash and remove personal protective equipment;
- Actions required in the event of a cyanide spill during off-loading;
- The required PPE to be worn by both the driver and Consignee Qualified Person during the off-loading activities; and
- That the Buddy System must be adhered to during off-loading activities.

Procedure EVP 03 The Buddy System Rev 00 requires that two fully trained persons are present during any work done at the cyanide equipment area. One person will conduct the work and the other will observe from outside the work area. This was confirmed during the site visit.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date



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 preventative 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:

The operation is in full compliance with Standard of Practice 4.1 to implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventative maintenance procedures.

The site does not have heap leach facilities or processing ponds. The Plant’s procedures include the following:

- EVP 07 Clearance Certificate for Hot Work;
- EVP 08 Clearance Certificate for Vessel Entry;
- EVP 20 Cyanide Sampling Procedure; and
- EVP 21 Cyanide Tank Dilution.

The tailings facility has the Evander Gold Mine Winkelhaak Gold Disposal Operating Manual, ref: FFA/T/013/2001, dated May 2001, which includes the following: Slurry Delivery, Slurry Deposition and Wall Building, Decant Systems, Return Water System, Miscellaneous Maintenance, and Decommissioning.

The Cyanide set point is between 200 and 210 ppm. Regular pH monitoring is conducted to ensure it does not drop below 10.2. No work is allowed at 9.8 ppm. WAD cyanide readings are not to exceed 50 ppm in the residue slime at all times.

Freeboard for the 3 compartments (Dam 2, 3 and 4) of the Winkelhaak TSF is calculated on a monthly basis using the TORAS System which is a hazard management system. The daily deposition data is populated in the system and the freeboard is calculated based on the daily data. The RWD dams and Surge Ponds are kept at least 800mm below overtopping.

The electronic DMS 2000 PMS (Planned Maintenance System) was implemented on a fulltime basis from March 2012. The electronic PMS ceased to be operated in 2015 due to the loss of the PMS Planner. The maintenance program since then has been a manual process with job cards being issued. There is a maintenance schedule and a range of visual checks are undertaken, which are listed below.

The auditors observed the following inspection checklists:

- Completed daily pump station inspections for 23 May 2016 – 01 June 2016.
- Emergency Shower checklist - March 2013 to date;
- Emergency Cyanide Cubicle checklist - March 2013 to date;

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

- Off-loading at Cyanide Facility checklist -March 2013 to date;
- Area inside of Cyanide Tanks checklist - March 2013 to date;
- Cyanide Anti-dote Kit checklist - March 2013 to date;
- Cyanide Bund Area checklist - March 2013 to date;
- Flametec monthly inspection records for fire extinguishers observed for 2012, 2014, and 2015; and
- Inspection of fire house reel checklist - Jan 2015 to date.
- Pipeline inspections and TSF Inspection: Daily - TSF Daily Inspection Logbook - 2 August 2013 to 6 November 2013, 10 Feb 2014 - 10 May 2014, 22 August 2015 to 29 March 2016 which, include the following: inspection of pipelines, penstocks, Daywalls, seepage, spillage, pool, pool wall, berms, solution trenches, catchment paddocks, wildlife.
- TSF: Annual Inspections and Report - 2013 / 2014 - Kinross and Winkelhaak Annual Stability Reports, 2015 Winkelhaak Annual Stability Report conducted by Frazer Alexander Tailings.
- Quarterly Inspection and Report - Winkelhaak Tailings Disposal Facility Quarterly Report June 2015, February 2016. Evander Gold Mine Tailings Disposal Facility Quarterly Report February 2013, August 2014.
- Risk Audit Metallurgical Plants (structural inspection) conducted for 2013, 2014, 2015.
- Kinross (alternative name for Evander) Metallurgical Plant – Structural Mechanical and Civil Audit, ref DTS636-2016, dated 3 June 2016 by Dweba Technical Services

The operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters.

Management of Change (MOC) Directive (Procedure), SPP 4, Rev 01 stipulates the steps to follow during a Change Management process i.e. Initiate the Change request, Evaluate the Change Request, Approve the Change Request, Management of Change process, Close-out Management of Change process. Important factors such as the current situation, proposed situation and expected outcome is considered. It further considers potentially affected parties, priority of implementation, whether the change is temporary or permanent, etc.

Procedure EVP 60 Respond to Abnormal and Emergency Conditions includes the following conditions: Residue Pachuca overflowing, Surge Dam overflowing, Precip Tank overflowing, Residue pipeline burst.

Evander Tailings Re-Treatment Plant, Doc No. 1282-002-32-470-000-001_0A Rev A, 05 June 2014 states "Section 3.2.1 - Planned Plant Shut Down: If the plant is shut down for maintenance, correct procedures shall be followed. This will ensure the correct condition for rapid start-up. Certain units are left operating or are periodically run for short periods to prevent choking of pipelines and settling of slurries in tanks.

In the event of a 1:50 year or 1:100 year rainfall event - water will be pumped from the various return water dams (RWDs) and Surge Pond to the Leeuwpan evaporation pond to prevent overtopping from the RWDs

The operation undertakes inspections at the unloading, storage, mixing and process areas as listed above.

One back-up generator is available for the plant. The generator will provide power to the thickener and leach tank agitators running during a power failure. The cyanide in the pipelines will run back to the storage facility without releasing to the environment during a power failure.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

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:

The operation is in full compliance with Standard of Practice 4.2; introducing management and operating systems to minimise cyanide use, thereby limiting concentrations of cyanide in mill tailings.

Evander Gold Plant embarked on a project to optimise cyanide consumption in the leach process.

The project involved the following:

- Replacing TAC 2000 monitor with a TAC 1000 monitor. The new inline monitor improved the cyanide addition, and provides better communication by means of sms when cyanide consumption spikes.
- Upgrading the inline oxygen injection system by lengthening the leach tank feed (pipe) providing better dissolution of the oxygen. The increase in oxygen in the leach tanks improved the leaching efficiency and reduced cyanide consumption; and
- Installation of Pachuca valve as a backup in case that normal agitation can't take place.

Manual sampling for total cyanide is done every 2 hours in the head tank to determine the optimal working of the TAC 1000 inline analyser and dosing system. The samples are also used to determine plant control (testing for cyanide availability, gold in solution, pH, available oxygen, lime, etc.).

Manual sampling is done every two hours in the residue tank to confirm the total cyanide levels. If total cyanide is above 90 ppm, then the set point is adjusted in the head tank. An inline WAD analyser takes samples every 10 minutes to determine the WAD levels. If the WAD is above 50 ppm then the set point is adjusted in the head tank.

A downward trend is observed in the total cyanide concentration in the residue tank during July 2014 to March 2016 from 140 ppm to 90 ppm.

From July 2014 to Feb 2015 - the high and low grade streams were mixed during treatment. This resulted in high fluctuations in cyanide consumption. Post Feb 2015 the high and low grade streams were separated during treatment and this resulted in the stabilisation of cyanide consumption.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

Evander Gold Plant
Name of Facility

30 June 2016
Date

Signature of Lead Auditor





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

The operation is in full compliance with Standard of Practice 4.3 to implement a comprehensive water management programme to protect against unintentional releases.

The operation has developed a probabilistic water balance based on historic data collected since 1994. The information is used to predict the possibility of return water dams and plant dam overtopping in the event of a 1:50 year and 1:100 year storm event.

The water balance includes the following:

The rate at which tailings is deposited onto the TSF (Winkelhaak TSF). Operational controls have been implemented to pump water from the RWD dams to the Leeuwan evaporation pond to prevent overtopping into the local streams in the event of a 1:50 year or 1:100 year storm event.

6 Rain gauges are located across the operation to measure actual rainfall. A Simon's type evaporation pan is located at the Leeuwan evaporation pond to measure the evaporation for the complex. The Operation compares the precipitation with the design assumptions to determine the management of the ponds in order to prevent overtopping.

There are no freezing and thawing conditions. The water balance is calculated on a 30% loss of water to seepage and phreatic surface from the TSFs and RWDs.

There is also a mobile generator available to power the pumps in the event of a power failure. There is no direct discharge to surface water. There are no treatment, destruction or regeneration systems required

The ponds are monitored on a weekly basis including dam levels and this is then compared against the water balance. This is described in Procedure EPR032 Pollution Control Dam Level Monitoring Procedures Rev 0. There are also water flow meters to monitor the flow of water through the system.

Due to the age of the Mine the ponds have not been designed to be able to cope with a specific design storm and therefore are operated at 800mm below the overflow level as required by local legislation.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.4

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 4.4 to implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions

The auditors observed the WAD monitoring data for the recertification period. The data provided a Shiftly average (3 shifts per day) and a daily average. When an exceedance occurs, the cell of that specific occurrence is highlighted. One exceedance occurred on 9 September 2014 evening shift. There is no need to restrict access by wildlife and livestock to open waters due to low levels of WAD cyanide in the tailings.

WAD, Free and Total Cyanide sampling is done every 3 months at the following points: Kinross Plant, WB1, WB2, WB3, WH 5, Winkelhaak Kariba (RWD), Winkelhaak Slime (Deposition), ETRP (low grade stream). Sampling Reports by DD Science cc Environmental Monitoring for 6 February 2015, 10 March 2015, 12 May 2015, 22 Dec 2015, 29 September 2015 showed all WAD results were below 50 ppm.

Evander Gold Plant
Name of Facility

30 June 2016
Date

Signature of Lead Auditor





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

The auditors observed an abundance of bird life and other wildlife on the TSF with no observed mortalities. No cyanide related wildlife deaths have been recorded in the past 3 years. There is no heap leach currently being operated.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.5

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 4.5 to implement a comprehensive water management programme to protect against unintentional releases.

There are no direct or indirect discharges to surface water.

The auditors observed the monthly water monitoring results for the Winkelhaak Emergency Dam. All results for 2013, 2014, 2015 were <0.01 mg/l.

Sampling point BM 11 downstream of the Winkelhaak TSF in the Winkelhaakspruit showed that all results for 2013, 2014, 2015 were <0.01 mg/l.

The auditors observed the following:

Groundwater monitoring data for Winkelhaak TSF (WB1 D, S), WB2 D, S (downstream of RWD near Winkelhaakspruit). Groundwater monitoring is done twice a year. All results for the deep and shallow aquifer were <0.01 mg/l.

Groundwater monitoring data for Evander Gold Plant and Surge Pond (KB7 and KB 13) showed all results were <0.01 mg/l. Monitoring for free cyanide commenced in October 2013 and is undertaken 6 monthly.

The auditors observed: EPR No. 026 Procedure for Surface Water Monitoring Rev No. 1, 4 November 2015; and EPR No. 025 Procedure for Groundwater Monitoring Rev. No. 2, 17 October 2015.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.6

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 4.6 to implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

Mill tailings are not used as underground backfill.

Groundwater monitoring results indicate that the Free Cyanide in the groundwater is <0.01 mg/l for the recertification period.

The Winkelhaak TSF is equipped with toe drains that feed into the solution trench. The penstock pulls the water from the TSF to the RWD.

There is no numerical standard established by the applicable jurisdiction for WAD cyanide or any other species of cyanide in groundwater, therefore there are no compliance points below or down gradient of the gold plants or tailings facilities.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.7

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 4.7 to provide spill prevention or containment measures for process tanks and pipelines.

Secondary containments for cyanide unloading, storage, mixing and process tanks are sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. There are no cyanide process tanks without secondary containment.

The reagent strength cyanide pipeline runs in a launder in areas not otherwise protected by a bund. The Tailings pipeline from the plant to the TSF has catchment paddocks constructed along the route to collect any spillage or to be used during maintenance to contain spillage.

The Tailings pipeline has been placed in a double pipe where the pipeline crosses over the Winkelhaak spruit (local stream) next to the RWD at the Winkelhaak TSF.

The cyanide storage tanks, CIL, Leach and Residue tanks are manufactured from mild steel. The tailings pipeline and return water pipeline are HDPE.

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:

Evander Gold Plant
Name of Facility

30 June 2016
Date

Signature of Lead Auditor





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

The operation is in full compliance with Standard of Practice 4.8 to implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications

The previous re-certification audit found the following:

“The old cyanide storage facility was replaced with a new facility. The facility was designed by Engineers from Harmony Engineering, Welkom, ELROX Engineering and inspected by the cyanide producers representative - sighted available design drawings (Signed by S I Bester ECSA (Engineering Council of South Africa) Pr Eng No 850123)

- Chemical Storage facility tank foundation Drawing No.433-0002-002-N034;
- Cyanide storage tank A & B Design Data notes No. Elr199s01 rev1; and
- Cyanide storage tank A & B Arrangement and details Drawing No. Elr199s02 rev1. “

No other QA/QC records are available due to the age of the Plant.

The following inspections have been undertaken.

Sodium Cyanide Bulk Storage Facility Technical Inspection Reports conducted annually by Sasol Base Chemicals Supply Chain (Cyanide Manufacturer). Observed reports for 2013, 2014 and 2015. The reports contain the results of the inspection conducted on the off-loading and storage facilities.

TSF: Annual Inspections and Report - 2013 and 2014 - Kinross and Winkelhaak Annual Stability Reports, 2015 Winkelhaak Annual Stability Report conducted by FAT and reviewed by Koos Davel Independent Professional Engineer.

Quarterly Inspection and Report - Winkelhaak Tailings Disposal Facility Quarterly Report June 2015, February 2016. Evander Gold Mine Tailings Disposal Facility Quarterly Report February 2013, August 2014. Conducted by FAT and reviewed by Koos Davel Independent Professional Engineer. The February 2016 Quarterly report stated "the Tailings Dam complex is being well managed. Housekeeping is of a good standard. The overall stability is above 1.3."

Risk Audit Metallurgical Plants (structural inspection) conducted for 2013, 2014, 2015 undertaken by internal engineer.

Thickness testing of CIL, CIP and reagent storage tanks on 9 May 2014 and 13 December 2015 by Matomo and Cubiscan (Pty) Ltd respectively.

Kinross Metallurgical Plant – Structural Mechanical and Civil Audit, ref DTS636-2016, dated 3 June 2016 by Dweba Technical Services states that the Plant can continue to be operated under current conditions. This audit was signed off by DC Moolman – Engineering Designer and S.I. Bester – Professional Engineer.

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

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 4.9 to implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

The operation has developed written standard procedures for monitoring activities. The following were observed by the auditors:

- EPR No. 026 Procedure for Surface Water Monitoring Rev No. 1, dated 4 November 2015;
- EPR No. 025 Procedure for Groundwater Monitoring Rev. No. 2, dated 17 October 2015; and
- EPR No. 027 Procedure for preservation of water samples Rev No. 1, dated 04 November 2015.

The procedures (Surface Water, Ground Water, Sample Preservation) were developed by the Evander Gold Mine Environmental Manager in conjunction with Shangoni Environmental Management Services (consultant). The Environmental Manager has 36 years mining experience of which 8 years are as the Environmental Manager.

The procedures describe the monitoring locations for ground and surface water monitoring. The monitoring procedures include the local monitoring plan, sampling equipment and cyanide species to be analysed. All samples are taken to the local accredited laboratory. If samples are not taken within 12 hours to the lab, the procedure for sample preservation (EPR No. 027) will be used

The Environmental Sampling Sheet indicates the following: Samples Category, Sampling Station, Sample taken, Analysis required, Weather Condition, Livestock, Wildlife activities, Human Activities, Sample Preservation.

The Environmental Department monitors Free Cyanide in the groundwater (6 monthly) and surface water (weekly and monthly) at various points downstream of the operations. The results for 2013, 2014 and 2015 were all <0.01 mg/l.

The operation inspects for and records wildlife mortalities related to contact with and ingestion of cyanide solutions. This is done on the daily inspection records for the TSF and the daily inspection records for the Plant. No wildlife mortalities have been observed.

Monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner.

Surface monitoring is done weekly and monthly. Groundwater monitoring is done 6 monthly. WAD cyanide in the residue tank is undertaken by a continuous inline monitor.



PRINCIPLE 5 – DECOMMISSIONING

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

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

in full compliance with

The operation is in substantial compliance with **Emergency Response Practice 5.1**

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 5.1 to plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

The operation has developed written procedures to decommission cyanide facilities at the cessation of operations including the following:

Procedure EVP 78 Cyanide Decommissioning Procedure Rev 00, 28 February 2014 states the objectives of the decommissioning closure, demolition and rehabilitation activities for the cyanide facilities.

Evander Gold Mines Rehabilitation Strategy and Implementation Program, April 2014, was compiled by the Environmental Manager. The program details the existing rehabilitation initiatives, Rehabilitation Objectives and Goals, Rehabilitation Implementation Programme, and Rehabilitation Plan.

Draft Closure Plan compiled by the Environmental Manager details the areas of rehabilitation, future land use, rehabilitation action, action status, etc.

The Closure Liability spreadsheet contains a timeline for all items with a start and finish date.

The Rehabilitation Plan includes actions required in the short term (0-4 years), medium (4-8 years) and long term (8-12 years).

The Closure Plan, Rehabilitation Strategy and Implementation Program are reviewed annually.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 5.2**

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 5.2 to establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

The operation has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its site decommissioning or closure plan. This includes the following:

Evander Gold Mine Closure Costing Review 2014. SLR Project No. 755.05039.00001 Report No. 2 July 2014. Provision was made for Decontamination of the cyanide facility in the Metallurgical Plant. Once decontaminated, the structures will be demolished with the rest of the plant.

Evander Gold Mine Closure Cost Review 2015. Provision is made for the decontamination and demolition of the cyanide storage facility inside the metallurgical plant. Closure Costs are updated every two years by an independent environmental consultant.

Evander Gold Mine has established a rehabilitation trust fund with Pan African Resources Group Rehabilitation Trust. The letter from the Trust, dated 20 January 2016 states that the current fund is adequate to cover the current closing rehabilitation liability for Evander Gold Mining (Pty) Ltd

Evander Gold Plant
Name of Facility

June 2016
Report No. 1653518

Signature of Lead Auditor

30 June 2016
Date





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 measure as necessary to eliminate, reduce and control them.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.1

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 6.1 to identify potential cyanide exposure scenarios and take measure as necessary to eliminate, reduce and control them.

The operation has developed procedures describing how cyanide-related tasks such as unloading, mixing plant, operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conducted to minimise worker exposure.

The procedures observed, specify the required PPE to be used as well as pre-work inspections and risks.

Management of Change (MOC) Directive (Procedure), SPP 4, Rev 01 was observed by the auditors.

The Directive stipulates the steps to follow during a Change Management process i.e. Initiate the Change request, Evaluate the Change Request, Approve the Change Request, Management of Change process, Close-out Management of Change process. Important factors such as the current situation, proposed situation and expected outcome is considered. It further considers potentially affected parties, priority of implementation, whether the change is temporary or permanent, etc.

Procedures are drafted by the Safety Committee which consists of the Plant Manager, Plant Engineer, Plant Safety Officer, Business Unit Leader, Training Officer and Union Representative.

Worker input is obtained during the monthly Health and Safety Meetings. Feedback from experienced workers on procedural steps that need revision, as observed during PTOs, will result in the revision of a procedure.

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:

The operation is in full compliance with Standard of Practice 6.2 to operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

Procedure EVP 61 - Response to low pH level, Rev 00, 28 February 2014 states: "Discharge points of cyanide must always enter the process stream at a point where the pH is maintained above 10.2. No work is allowed





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

at 9.8 pH". An inline pH monitor has been installed in Tank 1 of CIL (high grade stream), Tank 2 of ETRP (Evander Tailings Remaining Project) (low grade stream) and one of the Residue Tanks (interlinked).

Three MSA fixed HCN Monitors has been installed on the Leach Tanks (Tank 1 of High Grade Stream, Tank 2 of the ETRP, Tank 5 of ETRP). One MSA fixed HCN monitor has been installed in the bund of the Cyanide Storage Tank.

Five personal monitors are available for use - 1 used by FAT, 1 at Health Hub (dressing station), 1 in cyanide cubicle, 1 in control room, 1 spare.

The alarm for fixed monitors are set at 4.5 ppm. Alarm for personal monitors are set at 7.5 ppm (first alarm) and 10 ppm (2nd alarm).

Hydrogen cyanide monitoring equipment is maintained, tested and calibrated, and records are retained for at least one year. It was noted that during the recertification period some of the monitors went longer than the stipulated calibration period. All of the monitors are currently up to date with their calibration.

A revised procedure has been produced to ensure that the lapse in calibration of the cyanide monitors does not reoccur, the procedure is EVP 83, Monitoring of and Calibrating Fixed & Portable Gas Monitors. This includes a matrix that will flag in the fifth month to alert the responsible persons of the expiry of the calibration. The matrix was observed by the auditors.

Warning signs has been placed at areas where cyanide is used advising workers that cyanide is present, and that no smoking, open flames and eating and drinking are not allowed. This was observed during the site visit. PPE requirements are stipulated at all these areas.

Showers, low pressure eye wash stations and dry powder or non-acidic sodium bicarbonate fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis. This was observed by the auditors during the site visit.

It was observed during the site inspection that safety showers, low pressure eye wash stations and dry powder fire extinguishers are available at the areas where cyanide is used - cyanide storage area, top of CIL, ADS and Residue.

A 25 litre water container is taken to the TSF on a daily basis for use in the event of an emergency to wash the individual.

Cyanide storage tanks are colour coded (red with purple band), reagent strength cyanide feed pipes are colour coded (purple) and flow direction is indicated with an arrow. The high grade cyanide dosing point is labelled to indicate the use of cyanide. The dosing points on Tank 2, Tank 4 and Tank 5 of the ETRP stream are all colour coded (purple). Tailings pipeline is labelled with (poisonous slime) and the flow direction is indicated on the pipeline.

The MSDS and First Aid Procedures are displayed at the Cyanide Storage Area, TSF and in the Control Room.

Procedures are in place and being implemented to investigate and evaluate cyanide exposure incidents to determine if the operation's programs and procedures to protect worker health and safety, and to respond to cyanide exposures, are adequate or in need of revising.

The Plant has two procedures for incidents, these are;

- EVP 36 Injuries Involving a Fatality dated 11 July 2014 Rev 00, and
- EVP 37 Incidents Involving Serious Injury dated 11 July 2014 Rev 00.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

Where an incident could have led to a serious injury e.g. exposure to cyanide the procedure EVP 37 is used.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 6.3 to develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

The Cyanide Emergency Cubicle next to the cyanide offloading and storage tanks contains oxygen, a resuscitator, antidote kits and a telephone. Personnel have radios on them for communication with the control room who are informed in the first instance when there is an incident. The top of the CIL has emergency showers and eye washes. The showers are alarmed and there is a man down alarm. The shower alarms register on the SCADA system in Control Room adjacent to the CIL. The Control Room contains Oxygen, PPE and a telephone. Antidotes are also kept in the Business Unit Leaders office and the Trainers office.

The TSF personnel have radios. They have a 25 litre container for water. They also have oxygen and appropriate PPE

The operation inspects its first aid equipment regularly to ensure that it is available when needed, and materials such as cyanide antidotes are stored as directed by their manufacturer and replaced to ensure that they will be effective when needed.

It was communicated that the expiry date on the anti-dote kit stored in the Cyanide Cubicle is used to determine when all need to be replaced. Anti-dote kits are ordered one month prior to expiry. The expiry date for all antidote kits was observed to be September 2016.

The operation has developed Evander Gold Mining (Pty) Limited Emergency Response Plan - ERP No. 1, 15 April 2016 to respond to cyanide exposures. The Emergency Response Plan includes cyanide related emergencies.

Evander Gold Plant has five trained First Aiders that are spread over the 3 daily shifts. It was observed that the names of the First Aiders were signposted at strategic locations.

There is a contract between ER24 (private emergency medical response company) and Evander Gold Mine, Contract No. CS/12/04/0011 - Emergency Medical Care at Evander. In addition there is a Service Level Agreement with Highveld Medi-Clinic dated 30 March 2016.

Training was conducted by Sasol for Cyanide/ Caustic/HCL conducted on 03 February 2016 during which two nurses from the Medi-Clinic attended the training at the plant.

Procedure EVP 02 - Ambulance entry in the event of an emergency, Rev 00, 28 February 2014 states that security will allow the ambulance to enter and exit freely.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

Mock drills for all types of emergencies are undertaken every 3 months. The auditors observed Mock Drill videos and documentation for 2013, 2014 and 2015.

Evander Gold Plant
Name of Facility

June 2016
Report No. 1653518

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Signature of Lead Auditor

30 June 2016
Date





PRINCIPLE 7 – EMERGENCY RESPONSE

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

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

[X] in full compliance with

The operation is

[] in substantial compliance with

Standard of Practice 7.1

[] not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 7.1 to prepare detailed emergency response plans for potential cyanide releases.

The operation has developed an Emergency Response Plan to address potential releases of cyanide that may occur on site or may otherwise require a response including the following:

Evander Gold Mining (Pty) Limited Emergency Response Plan - ERP No. 1, 15 April 2016. The Emergency Response Plan includes cyanide related emergencies.

FAT SHEQ Emergency Preparedness Plan no. T-JET-SHEQ 0620 0047 ver 1.1 dated 11 June 2013. P9 Cyanide Incident.

The Plans consider the potential cyanide failure scenarios appropriate for its site-specific environmental and operating circumstances, including the following, as applicable.

- Catastrophic release of hydrogen cyanide from storage or process facilities (Section 15 - Hazardous Chemical Spillage - Bulk chemical spillage);
Transportation accidents (Section 15 - Hazardous Chemical Spillage - Bulk chemical spillage, and Procedure EVP 46 - Liquid Cyanide Spillage, Rev 00, 21 February 2014);
Releases during unloading and mixing (Procedure EVP 44 - Liquid Cyanide Off-loading - Accidental Release Measures, Rev 00, 28 February 2014);
Releases during fires and explosions (Section 10 Plant or Vehicle Fires, Section 12 Surface Structure Fires, and Section 23 Explosion - Explosion);
Pipe, valve and tank ruptures (Section 15 - Hazardous Chemical Spillage - Bulk chemical spillage, Procedure EVP 42 - Leaking Cyanide Pipeline, Rev 00, 28 February 2014, Procedure EVP 26 - Emptying and Repairing a Leaking Cyanide Storage Tank, Rev 00, 28 February 2014, and Procedure EVP 06 - Change suction and delivery valves in cyanide storage area, Rev 00, 28 February 2014);
Overtopping of ponds and impoundments (Section 30 Slimes Dam Failure, and Section 20 Surface Flooding);
Power outages and pump failures (Section 21 Surface Power Failure);
Uncontrolled seepage (FAT SHEQ Emergency Preparedness Plan – Dam Failure/Seepage);
Failure of cyanide treatment, destruction or recovery systems (not applicable as no cyanide treatment undertaken); and

Evander Gold Plant
Name of Facility

Handwritten signature of Lead Auditor

30 June 2016
Date

Signature of Lead Auditor





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

Failure of tailings impoundments, heap leach facilities and other cyanide facilities (Section 30 Slimes Dam Failure).

Tanker Services are responsible for transportation related emergencies and are a fully ICMI certified transportation company.

The Plan describes specific response actions, as appropriate for the anticipated emergency situations, such as clearing site personnel and potentially affected communities from the area of exposure.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 7.2 to involving site personnel and stakeholders in the planning process.

Community meetings are held once a year at the Amandla Tavern (Zakhele community). The meetings are well attended by community members. A presentation was given to the community members about the use of cyanide and possible emergencies. The auditors observed the attendance register for the meetings on 16 March 2013, 24 May 2014, and 06 February 2016.

In addition Evander representatives attend the Govan Mbeki Municipality LDMAF (Local Disaster Management Advisory Forum) Meeting.

ER24 ambulance service and the Highveld Medi-Clinic in Trichardt are involved with the mock drills and training. ER24 and hospital staff are trained in cyanide emergencies through training by Sasol Polymers

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:

The operation is in full compliance with Standard of Practice 7.3 to designate appropriate personnel and commit necessary equipment and resources for emergency response.

The cyanide related elements of the Emergency Response Plan designate appropriate personnel and commit necessary equipment and resources including the following.

ERP Section 5 "The Operations Control Centre will be the central co-ordination point for all emergencies." The Control Centre will contact the relevant people as per the emergency procedure during normal working hours or as per stand-by list after hours.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

It is stated that the Control Centre will obtain permission from the Plant Manager if external resources are required to respond to the emergency.

The Emergency Response Team (First Aiders) are identified on a board by the Cyanide Storage Facility.

The ERP, Response to Cyanide Alarm, Section 27 states what the first, second, third and fourth people on the scene are required to do.

ERP Section 9 details the Emergency Telephone Numbers.

Employees are all trained to respond to the emergency scene and await further instructions. There are designated emergency responders who are also trained First Aiders who are the primary responders to an emergency.

Cyanide Off-loaders and Buddies, including First Aiders, as well as FAT employees receive the additional training provided by Sasol Polymers. The training covered product identification, risk and safe handling, product off-loading documentation, the effective use of PPE, the basics of preparing to handle emergencies, key steps in handling product spillages, key steps in rescuing an effected person, key principles of administering medical oxygen.

The ERP Section 5.1 Emergency Equipment Inventory states the equipment in the Cyanide Emergency Cubicle and the Control Room.

Procedure EVP 002 Ambulance entry in the event of an emergency, Rev 00, dated 28 Feb 2014 covers the roles of ER 24 and the Highveld Medi-Clinic.

ER24 ambulance service and the Highveld Medi-Clinic in Trichardt are involved with the mock drills and training. ER24 and hospital staff are trained in cyanide emergencies through training by Sasol.

In addition Evander representatives attend the Govan Mbeki Municipality LDMAF (Local Disaster Management Advisory Forum) Meeting.

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:

The operation is in full compliance with Standard of Practice 7.4 to develop procedures for internal and external emergency notification and reporting.

The Plan includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency including the following:

ERP Section 5 P6 "The Operations Control Centre will be the central co-ordination point for all emergencies." The Control Centre will contact the relevant people as per the emergency procedure during normal working hours or as per stand-by list after hours.

ERP Section 9 details the Emergency Telephone Numbers.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

The Integrated Emergency Response Manual rev 0, dated 1 June 2011, Section 25 states; "The Plant Manager will liaise with external emergency services e.g. SAPS and Local Authority." and

"The SAPS (South African Police Service) will evacuate the area should the community be affected".

The ERP Section 5 states "The Operations Control Centre will be the central co-ordination point for all emergencies." Employees will not disclose any information to the press or public and only the HR manager in consultation with senior management may release information.

Standard of Practice 7.5: Incorporate into 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:

The operation is in full compliance with Standard of Practice 7.5 to incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

The Plan describes specific remediation measures as appropriate for the likely cyanide release scenarios. This includes the following:

Integrated Emergency Response Manual rev 0, dated 1 June 2011, Section 35 Major Cyanide Spill, includes the procedure to be followed in the event of a major cyanide spill including the decontamination of the spill and the containment of contaminated soils. It also states that where possible the spill should be washed in to a bunded area from where it can be managed. If there is contaminated soil this is to be loaded into sealable containers and stored in the cyanide storage area.

Procedure EVP 46 Liquid Cyanide Spillage Rev 00 21 Feb 2014, includes the procedure to be followed in the event of a liquid cyanide spill (no solid cyanide is used).

The nearby communities obtain their drinking water from the municipality supply, which is sourced from outside the area. Therefore the potable water supply will not be affected and no alternate drinking water supply is required.

Integrated Emergency Response Manual rev 0, dated 1 June 2011, Section 35 Major Cyanide Spill states that "no cyanide should be washed into areas where they can contaminate the environment as this could lead to harm to nature and contamination of the groundwater."

The ERP Section 34 covers sampling and monitoring of boreholes and surface water, soil sampling, testing of samples, spillage containment, treatment of spillages, emergency monitoring, borehole monitoring points, handling of animal mortality, sampling chain of custody, and the use of treatment chemicals. It also states that sodium hypochlorite, ferrous sulphate and hydrogen peroxide must not be used for treating spills in flowing water.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





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:

The operation is in full compliance with Standard of Practice 7.6 to periodically evaluate response procedures and capabilities and revise them as needed.

The Emergency Response Plan (Mine Wide and Plant) and the Crisis Management Plan are reviewed on an annual basis or if there are significant changes.

The Plant's ERP Section 3.5 states that the ERP must be reviewed on a two yearly basis.

Mock drills for all types of emergencies are undertaken every 3 months. The auditors observed Mock Drill videos and documentation for 2013, 2014, and 2015.

The ERP Section 3.5 states that the ERP will be revised if deficiencies are found from the Mock Drills. It also states that the ERP will be revised after a major event. This has not been required since the last recertification audit.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date



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.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.1

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 8.1 to train workers to understand the hazards associated with cyanide use.

Cyanide training is provided to all employees as part of the induction programme. An induction video (Cyanide and First Aid Training) is shown to all employees, contractors including FAT employees during initial induction as well as ex-leave induction.

The EVP 74 - Cyanide Training Matrix Evander Plant, Rev 01, 22 March 2016 lists all the Standard Task Procedures against the groups that will require specific training in the procedures. Groups include: All employees, Cyanide Section Employees, Cyanide Specialist, Maintenance Staff, Emergency Personnel. Evander Gold Mine uses a system called EMPower to track training requirements and training expiry dates. A data capturer is responsible for maintaining the system and will send out emails when the system alerts them to training that will expire in the next month.

Refresher Cyanide Induction Training is conducted annually after employees return from annual leave.

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.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 8.2 to train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

All employees must receive the Cyanide and First Aid Induction training prior to being allowed in the plant. The plant works with a card clock system that will not allow a person to go into the plant prior to receiving the initial induction training as well as ex-leave training

Cyanide Off-loaders and Buddies, including First Aiders, as well as FAT employees receive the additional training provided by SASOL. The training covered product identification, risk and safe handling, product off-loading documentation, the effective use of PPE, the basics of preparing to handle emergencies, key steps in

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

handling product spillages, key steps in rescuing an effected person, key principles of administering medical oxygen.

The auditors observed the attendance register for Sasol Base Chemicals Training conducted on 25 November 2015. PTO records undertaken for the off-loaders were also observed evaluating the effectiveness of cyanide training by observation.

EVP 74 - Cyanide Training Matrix Evander Plant, Rev 01, 22 March 2016 identifies the training elements (Standard Task Procedures) required by each group of employees (All employees, Cyanide Section Employees, Cyanide Specialist, Maintenance Staff, Emergency Personnel.) Each Standard Task Procedure is written in a PTO format which is used for training and observation.

Training is undertaken by the Evander training officer on site. Trainer Ishmael Shabangu is trained and registered as an Assessor (certificate no 188112) and Moderator (certificate no 140338), Training of Trainers (Oct and Dec 2000), Principles of Training (Sept 2000), Occupationally Directed Education, Training and Development Practices ID 50332, NQF Level 4 (Dec 2015).

Training records are retained for 40 years 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 and understanding of the training materials.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 8.3 to train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

All employees must receive the Cyanide and First Aid Induction training prior to being allowed in the plant. This includes procedures to be followed if cyanide is to be released. The plant works with a card clock system that will not allow a person to go into the plant prior to receiving the initial induction training as well as ex-leave training.

Mock drills for all types of emergencies, which include all workers, are undertaken every 3 months. The auditors observed Mock Drill videos and documentation including post mortems for 2013, 2014, and 2015. Procedures and Training will be revised based on the outcome of a mock drill post mortem. This has not been required to date.

Evander Gold Mining (Pty) Limited Emergency Response Plan - ERP No. 1, 15 April 2016 - Section 27 Cyanide Emergency Procedure states what the first, second, third and fourth people on the scene are required to do. Employees are all trained to respond to the emergency scene and await further instructions. There are designated emergency responders who are also trained First Aiders who are the primary responders to an emergency.

Cyanide Off-loaders and Buddies, including First Aiders, as well as FAT employees receive the additional training provided by Sasol Polymers. The training covered product identification, risk and safe handling,

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

product off-loading documentation, the effective use of PPE, the basics of preparing to handle emergencies, key steps in handling product spillages, key steps in rescuing an effected person, key principles of administering medical oxygen.

Training records are kept for 40 years. Training records include name of the employee, the trainer, date of training, topics covered.

ER24 ambulance service and the Highveld Medi-Clinic in Trichardt are involved with the mock drills and training. ER24 and hospital staff are trained in cyanide emergencies through training by Sasol. Training was conducted by Sasol for Cyanide/ Caustic/HCL on 03 February 2016 during which two nurses from the Medi-Clinic attended the training at the plant.

The auditors observed a video of the mock emergency drill in 2013 showing the involvement of ER24.

In addition Evander representatives attended the Govan Mbeki Municipality LDMAF (Local Disaster Management Advisory Forum) Meeting in November 2014.

Evander Gold Plant
Name of Facility

June 2016
Report No. 1653518

Signature of Lead Auditor

30 June 2016
Date





PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

Standard of Practice 9.1: Provide stakeholders with 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:

The operation is in full compliance with Standard of Practice 9.1 to provide stakeholders with the opportunity to communicate issues of concern.

Community meetings are held once a year at Amandla tavern (Zakhele community). The auditors observed the attendance registers for a Cyanide Presentation undertaken at the community meetings on 16 March 2013, 24 May 2014, and 06 February 2016. The meetings were well attended by community members. A presentation was given to the community members about the use of cyanide and possible emergencies. The presentation was given by the Training Officer, Plant Manager, Chief Safety Officer, Senior Metallurgist and Security Manager in English and the local language.

Community members were provided with the opportunity to ask questions after the presentation.

Evander representatives attended the Govan Mbeki Municipality LDMAF (Local Disaster Management Advisory Forum) Meeting on the 17 November 2014. The minutes of the meeting were observed by the auditors.

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:

The operation is in full compliance with Standard of Practice 9.2 to initiate dialogue describing cyanide management procedures and responsively address identified concerns.

Community meetings are held once a year at Amandla tavern (Zakhele community). The auditors observed the attendance registers for a Cyanide Presentation undertaken at the community meetings on 16 March 2013, 24 May 2014, and 06 February 2016. The meetings were well attended by community members. A presentation was given to the community members about the use of cyanide and possible emergencies. The presentation was given by the Training Officer, Plant Manager, Chief Safety Officer, Senior Metallurgist and Security Manager in English and the local language.

Community members were provided with the opportunity to ask questions after the presentation.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





ICMI CYANIDE RE-CERTIFICATION AUDIT - SUMMARY REPORT

Evander representatives attended the Govan Mbeki Municipality LDMAF (Local Disaster Management Advisory Forum) Meeting on the 17 November 2014. The minutes of the meeting were observed by the auditors.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.3

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 9.3 to make appropriate operational and environmental information regarding cyanide available to stakeholders.





Community meetings are held once a year at Amandla tavern (Zakhele community). The auditors observed the attendance registers for a Cyanide Presentation undertaken at the community meetings on 16 March 2013, 24 May 2014, and 06 February 2016. The meetings were well attended by a number of community members. A presentation was given to the community members about the use of cyanide and possible emergencies. The presentation was given by the Training Officer, Plant Manager, Chief Safety Officer, Senior Metallurgist and Security Manager in English and the local language.

Community members were provided with the opportunity to ask questions after the presentation.

During the annual community meeting, posters with writing and pictures are shown to the community. The writing and pictures are interpreted to the community members in English and the local language. These posters are available to stakeholders on request.

Any communication on fatality or significant environmental incidents will be handled in accordance Evander Gold Mining (Pty) Limited Emergency Response Plan - ERP No. 1, 15 April 2016 - Section 5. The Evander HR Manager will communicate to the Corporate Structure before any information will be release via a Media Briefing.

Annual reporting on fatalities and significant environmental incidents are done via the Pan African Resources Integrated Annual Report. Observed Integrated Annual Report dated 30 June 2015. Report stated that there were no significant environmental incidents at any of the operations. This includes any of the following incidents:

-  Cyanide exposure resulting in hospitalisation or fatality;
-  Cyanide releases off the mine site requiring response or remediation;
-  Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment;
-  Cyanide releases on or off the mine site requiring reporting under applicable regulations; and

Releases that are or that cause applicable limits for cyanide to be exceeded.

Evander Gold Plant
Name of Facility

Signature of Lead Auditor

30 June 2016
Date





Report Signature Page

GOLDER ASSOCIATES AFRICA (PTY) LTD.

Handwritten signature of Ed Perry in black ink.

Ed Perry
Lead Auditor

Handwritten signature of Marie Schlechter in black ink.

Marie Schlechter
Project Manager

Date: 30 June 2016

MS/EP/ag

Reg. No. 2002/007104/07

Directors: SA Eckstein, RGM Heath, SC Naidoo, GYW Ngoma

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